HOSPITAL Topics

THE NEWS MAGAZINE FOR HOSPITALS

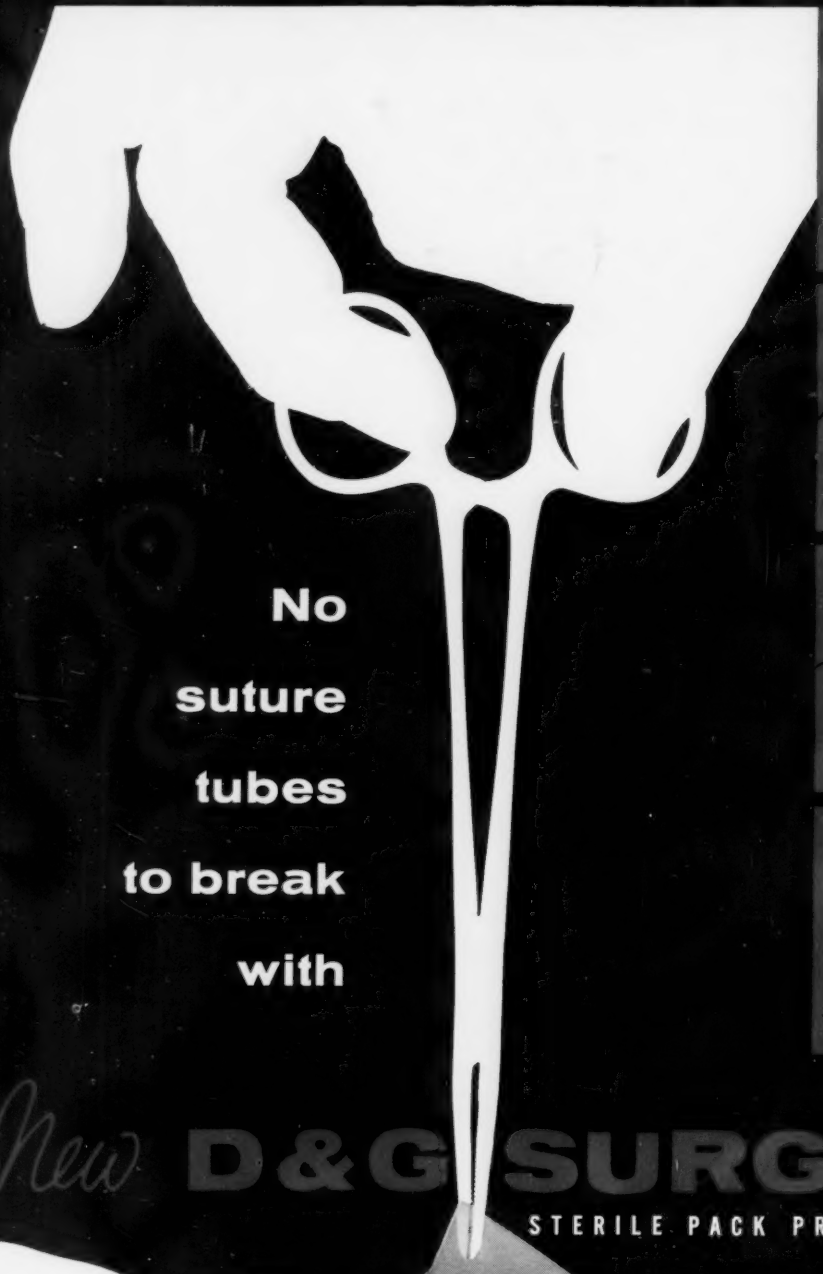
AHA CONVENTION REPORT ISSUE

BUYER'S GUIDE
Page 54

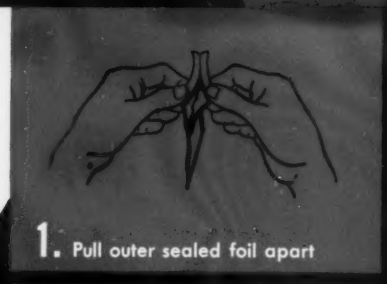
HUBERT W. HUGHES (see page 3)

Is Your Hospital Maintaining Its Tax-Exempt Status?
See page 24

OCTOBER | 1955



No suture tubes to break with



1. Pull outer sealed foil apart

2. Remove envelope with forceps or . . .

3. Drop envelope on sterile table.

4. Remove pre-cut sutures with tab.

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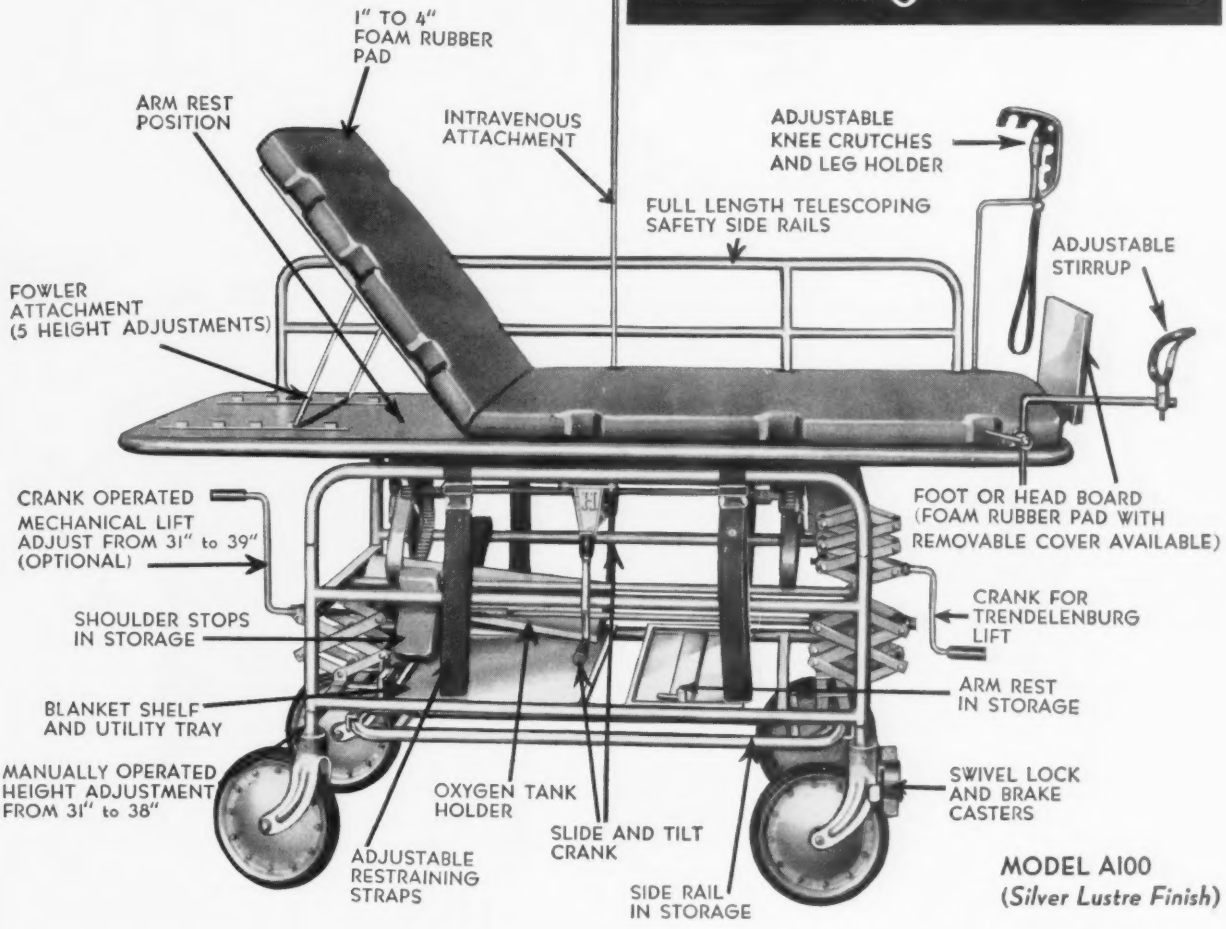
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Just fifteen seconds is required for even the smallest nurse or attendant to transfer a heavy patient from a Hausted "Easy Lift" to the bed.

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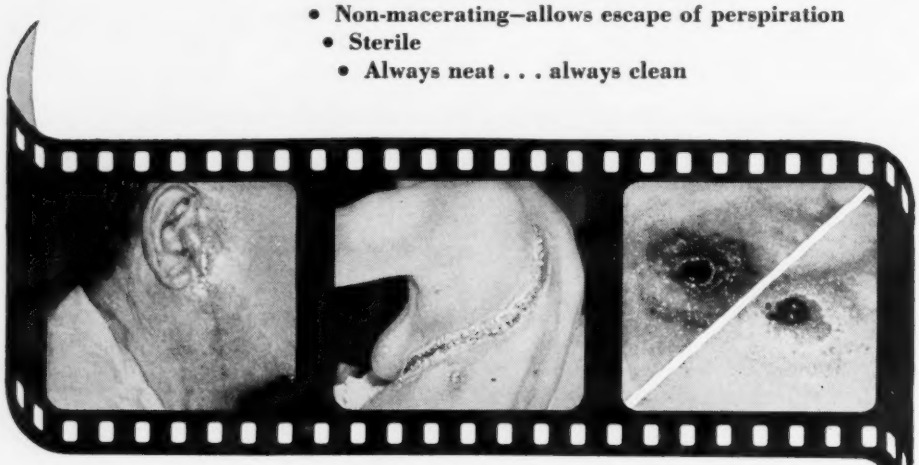


AS A BANDAGE*

Laceration (shown above)
Film dressing conforms to hard-to-bandage sites
Scalp wounds
Abrasions and Burns
Skin eruptions

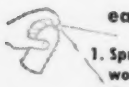
*If hemostasis is complete, use Aeroplast alone. If incomplete, apply one coat of Aeroplast, a layer of gauze, then spray gauze and surrounding skin area with Aeroplast.

AS A SURGICAL DRESSING

Thoracotomy (shown above)
Appendectomy
Herniorrhaphy
Major burns
Vein ligations
Mastectomy
Decubitus ulcers

AS A PROTECTIVE COATING

Excoriation (shown above)
Area around ileostomy cleared in 24 hours.
To prevent excoriation
To control dermatologic distress, e.g., itching or burning as in sunburn or poison ivy.
Under skintight casts
Episiotomy



easy to apply

1. **Spray a light film onto aseptic dry wound from a distance of 6 to 12 in.**
Cover adjacent area of intact skin to provide anchorage.
Hemostasis should be complete.
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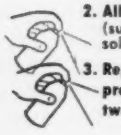

2. **Allow film to dry for 30 seconds.**
(sufficient time for the acetone solvent to evaporate)
3. **Repeat "spray and let dry" procedure (steps 1 and 2 above) two more times.**

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1. Vibesate (Aeroplast) — New and Nonofficial Remedies, 1955, p. 541.

HOSPITAL Topics
The News Magazine for the Hospital Staff
OCTOBER 1955, VOL. 33, NO. 10

G. M. Marshall
Publisher

J. F. Fleming, M.D.
Medical Editor

Marie Jett
Editor

Lois Smith
Managing Editor

Frances Henkin
Associate Editor

Nina Marie Stein
Editorial Assistant

Marcella Skandis
Advertising Production Manager

Gunhild Moberg
Business Manager

Published by THE HOSPITAL BUYER CO., Inc., 30 West Washington St., Chicago 2, Ill. Telephone: DEarborn 2-5148. Subscription rates: one year, $2.50; three years, $6.00; single copy, 35 cents. Canadian and foreign subscriptions: one year, $3.50; three years, $8.00; single copy, 50 cents.

A monthly publication. Entered as second class matter at the Post Office, Chicago, Illinois. Additional second-class entry at Long Prairie, Minn.

FEATURES

International College of Surgeons Meeting 14
Soundproofing the Hospital 17
American Congress of Physical Medicine 19
HOSPITAL TOPICS Goes Calling 22
California Blue Cross Tests Simplified Admission Plan 26
A.H.A. Convention 37

DEPARTMENTS

Prescription Pad 4
Clinical Notes 5
Scanning the News 7
News Briefs at Press Time 9
Calendar of Coming Events 10
Accounting Problems 24
Review of Hospital Lawsuits 30
The Book Corner 31
Trade Topics 33
Buyer's Guide 54
O.B. Department 69
Pediatric Nursing 73
The Lab 77
Personally Speaking 80
Central Supply 97

OPERATING ROOM

Pittsburgh A.O.R.N. Group Holds Annual Banquet 85
Explosion Hazards in the Operating Room 86
O.R. Question Box 92
O.R. Problem Clinic 93

PERSONALITY OF THE MONTH

Hubert W. Hughes, administrator of General Rose Memorial Hospital, Denver, Colo., is a man well known for his work in human relations within his own hospital and in the entire field. As proof of his ability to get along with people, Mr. Hughes has been a leader in most of the hospital organizations he has joined. Now president-elect of the Mid-West Hospital Association, he has been president of the Denver Hospital Council, president of the Colorado Hospital Association, program and exhibits chairman of the Mid-West Hospital Association, and delegate to the AHA from Colorado.

His other activities include being a trustee of the Colorado Hospital Association, delegate at large of the AHA and a member of several of its councils, a fellow of the American College of Hospital Administrators and a member of the Committee on Institutes of the ACHA.

During World War II, Mr. Hughes served as adjutant for the 31ts general hospital unit in the Pacific with the rank of major. He was also executive officer of the 251st station hospital in the Philippines and Japan.

He has been active in civic affairs also. He was formerly vice president of Big Brothers, Inc. and a director of Big Brothers of America.

Mr. Hughes has been administrator of General Rose Memorial Hospital since 1949 and was business manager at St. Anthony's Hospital, Denver, from 1939 until 1949. He is married and has three sons and a daughter. He is prominent in Boy Scout activities and also enjoys photography and travel.

prescription pad

Tablets for Controlling Tension, Anxiety

Ambar tablets and Ambar Extentabs (methamphetamine with phenobarbital) have been released by the A. H. Robins Co.

Each Ambar tablet contains methamphetamine HC_1 3.33 mg., and phenobarbital (⅓ gr.) 21.6 mg. Each Ambar Extentab contains the equivalent of three Ambar tablets, with the release of active ingredients controlled so that each Extentab provides the sustained therapeutic effects of one Ambar tablet for 10 to 12 hours.

Ambar is recommended by the manufacturer for relief of manifold symptoms in tension-anxiety states. It is also an appetite depressant..

Suggested dosage is one or two Ambar tablets three or four times daily. The manufacturer advises that patients with hypertension or cardiovascular disease should be under observation until their response to the drug is established.

Both Ambar tablets and Ambar Extentabs are available in bottles of 100 and 500.

Drug Offers Relief From Anxiety States

Equanil, a new drug released by Wyeth Laboratories, acts as a central nervous system depressant, lessening tension and reducing irritability and restlessness, the manufacturer says.

A derivative of propanediol, Equanil produces relaxation of skeletal muscles without affecting respiration and other vital functions, and also has important effects on the brain.

In clinical studies involving more than 300 persons, the drug was found to be non-habit-forming, practical, and safe.

Antibiotic Combination Used in Infection

Chlorostrep, a new antibiotic preparation combining Chloromycetin and dihydrostreptomycin, for the treatment of various enteritic infections, has been introduced by Parke, Davis & Co.

The new preparation has been successful in treating susceptible infections of the diarrheal type, and mixed infections encountered in bowel surgery.

Chlorostrep Kapseals, supplied in bottles of 12, each contain 125 mg. Chloromycetin and 125 mg. dihydrostreptomycin. Suggested dosage in dysenteric enteritis is one to four Kapseals every six hours. Pre-operatively, one to four Kapseals are given every six hours during three or four days before surgery, and, when fluids are resumed, for five to six days afterward.

New Anti-Shock Unit of Serum Albumin

A new, hepatitis-free, anti-shock unit of normal serum albumin (human), 5% solution in saline, equivalent in plasma volume expanding action to an equal amount of normal human plasma, is now available from Hyland Laboratories.

Each 250 cc. is the approximate colloid osmotic (water-binding) equivalent of an equal volume of citrated normal human plasma, or of 50 cc. concentrated (25%) solution of normal serum albumin. The solution is ready for immediate use (no reconstitution, blood grouping or typing) and because albumin is a natural constituent of human blood has no risk of foreign-substance reactions.

The product is packaged in 250 cc. units with administration set and suspension bail. Each unit contains 12.5 grams of normal serum albumin in saline.

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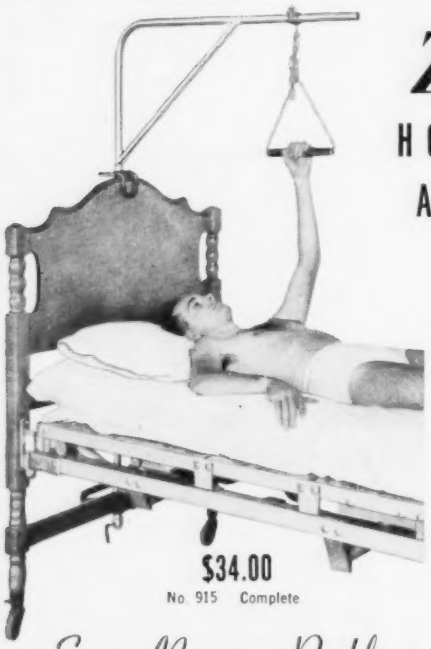

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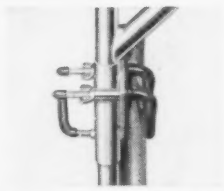
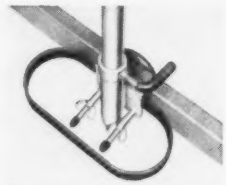


No. 915-3 Upper clamp and rotation lock.



No. 915-2 Lower clamp with height adjustment and wall bumper.

No. 649 Pelvic Traction Belt.

No. 205 Bilateral Traction Hook. Gives necessary height and eliminates the need of a spreader bar and two Buck's extensions.

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clinical notes

Study of Liver Function Recommended in Obese

Closer attention to liver function in treatment of the obese is recommended by Sapoznik in *The American Journal of Digestive Diseases* 22:159, 1955.

In a study of 46 private patients, the most effective of six reducing formulas was the one containing lipotropic agents.

An average weight loss of three pounds a week during a six-week period of medication was reported during therapy with the preparation (Obolip), with no apparent ill effects.

New Malaria Drug Acts Against Vivax and Falciparum

A new antimalarial compound, Plaquenil, resulted in rapid clinical improvement in 213 cases of P. vivax and P. falciparum infections, without any toxic effects, according to a report by Hoekenga in the *American Journal of Tropical Medicine and Hygiene* (4:22, 1955).

The new antimalarial was given orally and parenterally to Honduran natives ranging in age from seven to 65 years.

Parasites disappeared and fevers were brought down to normal in 18 to 48 hours. These results were obtained both in an orally treated group of 150 patients and in the 63 who received Plaquenil intramuscularly or intravenously. Single doses of varying concentrations were used for all 213 cases. Treatment failed in eight cases, and only three relapses were noted. The latter were re-treated and had no further relapes at the end of one year's observation.

No toxic effects were found. No local reactions occurred following intramuscular gluteal injections, and there was no appreciable change in pulse or arterial blood pressure in the group receiving intravenous injections.

Digitalis Therapy

Digitalis remains the only drug effective in congestive heart failure by acting at the source of the difficulty—the failing myocardium—says Ehrlich in *Arizona Medicine* 12: 239, June, 1955.

Digitoxin is probably as widely if not more widely used than any other digitalis preparation today, he points out.

A good present-day, all-purpose digitalis for general use, the author says, is Gitaligin. Its one particular advantage which places it apart from all other digitalis preparations is that the digitalizing dose is approximately one-third of the toxic dose. With all other preparations available, the digitalizing dose is two-thirds of the toxic dose.

Control of Diaper Rash

The efficacy of methylbenzethonium chloride (Diaparene Chloride) in controlling diaper rash and intertrigo is reported by Lipschutz and Fischer in the AMA *American Journal of Diseases of Children* 89:596, May, 1955.

The authors studied both the dusting powder and the water-miscible ointment in diaper rash. The powder proved about 80 percent effective and the ointment 85 percent effective when each was used alone. When either was combined with methylbenzethonium-chloride diaper rinse, the efficacy approximated 100 percent.

No toxicity or allergenicity was demonstrated.

Methylbenzethonium chloride baby powder was also found effective in treating intertrigo and seemed to be of value in skin care of orthopedic cases in casts, the authors added.

New Bronchodilator Drug

An unusual new bronchodilator drug that may provide an oral, safe means of preventing and relieving asthmatic attacks was reported at the annual meeting of the National Tuberculosis Association and the American Trudeau Society in Milwaukee.

The new drug, synthesized by Lakeside Laboratories, Inc., is known as JB-251. JB-251 is N-(2-(3, 4 methylenedioxyphenylisopropyl) norepinephrine hydrochloride. It has been found effective orally in improving ventilation in various respiratory conditions and was apparently free from significant side-effects even after prolonged maintenance dosage, in studies made by Hollis G. Boren, M.D., assistant chief, tuberculosis service, VA hospital, Houston, Texas. Complete mechanical studies of breathing were done in 36 cases to evaluate the drugs. The studies indicated the frequency with which the pressure fluctuations were decreased and the increased volume of air ventilated following use of JB-251 and others in the Lakeside series.

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HOSPITAL Topics
The News Magazine for the Hospital Staff

OCTOBER 1955
VOL. 33, NO. 10

Scanning the News

Overuse of Anti-Fat Drugs, M.D. Says

Too many overweight people are being treated with drugs to depress the appetite, according to Stanley C. Harris, M.D., physiologist and pharmacologist, Northwestern University.

Approximately 92 percent of physicians prescribe them and 65 percent of patients treated for obesity receive them. According to Dr. Harris, the reason for obesity is overeating and the reason for overeating is emotional problems.

If physicians could spend more time with patients and talk over problems, the need of a drug would be reduced, he says.

Ragweed Study

As a public service, Jewish Hospital of Brooklyn is studying and counting the pollen in the air in the New York Metropolitan area. Six testing stations within a fifty mile radius of Columbus Circle, Manhattan, have been set up.

A slide covered with vaseline will be placed in the pollen shelter and exposed to the air for a twenty-four hour period. Then it will be covered with purple fluid which stains only the pollen sticking to the slide. Finally, the pollen is counted under the microscope.

X-Ray Surveys In Relation To Chest Pathology

X-ray survey examinations of the chest pick up more pathology when they are part of routine hospital admission—and do little good as part of mass population surveys, outside the hospital, according to a symposium-discussion recently published in *Radiology*.

The problem is to convince busy doctors that this routine practice is a real necessity and direct help to their patients, the discussion concluded.

Now Alcohol Eases Surgery Strain

Drip intravenous administration of a solution of five percent alcohol, mixed with five percent dextrose and vitamins B and C, have been given to patients under local anesthesia.

Preoperatively the alcohol helped allay nervousness and apprehension. During the operation it diminished irritability, and postoperatively it helped relieve restlessness and pain. The infusion of alcohol was regulated to prevent the patient from becoming even mildly inebriated.

Young adolescents responded most dramatically to the alcohol administration, according to a recent report in the *Journal of International College of Surgeons*.

Wage-Earners Death Rate Is Lowered

The lowest death rate in the history of the country during the first six months of 1955 for American wage-earners and their families, has been announced by the Metropolitan Life Insurance Company.

Through June the death rate was 644.4 per 100,000 insured. That compared with the previous minimum of 652.1 established last year.

Dacron in Use For Artery Patch

An 18 inch dacron artery graft replacing a segment of blood vessel that had been blocked through hardening of the key artery in the thigh has been accomplished at St. Luke's hospital, Chicago.

A tube of Dacron selected for the correct diameter was cut to proper length at the operating table. Then it was sewed into place as a detour around the diseased femoral artery.

The Dacron tube will serve as a base through which the body will build new artery tissue in about four months.

Alcohol Inhalation Stops Frothing in Surgery Patients

Frothing of the mouth is being overcome by the inhalation of vaporized alcohol, reported Ruth Weyl, M.D., a Chicago anesthesiologist.

She reported seven cases in which an outpouring of large amounts of foam developed. Two of the patients had been operated on for heart abnormalities, two for cancer, one for a stomach obstruction, one for a hysterectomy, and one for sterilization. All seven were receiving oxygen when the pulmonary edema started.

An anesthesia machine was used as a vaporizer, and 95 percent alcohol was being administered along with oxygen in place of ether. The frothing, in each instance, was eliminated in about two minutes.

Drug Combination for High Blood Pressure

A combination of chlorpromazine and Rauwolfia has been used successfully to treat essential hypertension, according to Harold B. Eiber, M.D., New York Medical College.

Of the 75 patients treated with the combination, 95 percent said they felt better after two or three weeks of treatment. The improvement with the combined therapy was much greater than with the use of either preparation given alone.

New Enzyme-Dissolving Sponge Developed by Scientists

A starch sponge which dissolves harmlessly if left inside a patient, has been developed by chemists at the Department of Agriculture's northern research laboratory. The sponge, which has all the liquid-absorbing ability of animal sponges, is already in limited commercial production.

In certain surgical operations there will no longer be any need to remove the sponge. It may even be advantageous in some instances to leave the sponge inside, incorporated with antibiotics, which will be released into the blood stream as the sponge is absorbed.

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News Briefs at Press Time

ROUND-TABLES PROVE SUCCESSFUL AT ATLANTIC CITY MEETING

Small round-table sessions were enthusiastically received by AHA convention registrants in Atlantic City.

Size of the meeting-rooms (most of them held 35 or 40 persons comfortably, without crowding) contributed to the informality of the sessions. Principal complaint was that the time allotted was not long enough. Often a discussion was just getting under way when the time was up.

TOPICS' report on the meeting begins on page 37. Because of the many important subjects covered at the general sessions and in the round-tables, the report will be continued in the November issue.

PSYCHIATRIC AND NURSING GRANTS AVAILABLE

Six to 12 fellowships for postgraduate study in psychiatry will be awarded annually by the Smith, Kline & French Foundation, beginning in November. Program will be administered by the American Psychiatric Association, and stipends are expected to range up to $600 a month.

The Public Health Service is soliciting nurses' applications for research grants and fellowships. Its 1955-56 budget has $625,000 set aside for the program—which has as its objectives improvement in quality of nursing care, training of nurses in research methods applicable to nursing problems, and better use of the available supply of nurses.

MENTAL ILLNESS COMMISSION ORGANIZED FOR SURVEY

The Joint Commission on Mental Illness and Health will hold its first official meeting in Washington, D.C., October 8, to elect officers and complete organization.

The Commission was formed to conduct the national mental health survey—a three-year project backed by $1,250,000 in federal funds, with private assistance solicited also. Leo H. Bartemeier, M.D., Baltimore, director, Seton Institute, and chairman, AMA Council on Mental Health, is chairman of the commission's trustees.

ATOMIC ENERGY COMMISSION AWARDS RESEARCH CONTRACTS

Hospitals, universities, and medical schools received most of the 175 research contracts awarded recently by the Atomic Energy Commission.

All but 12 of the contracts are in medicine and biology.

AMA HIRES CHICAGO AGENCY AS PUBLIC RELATIONS COUNSEL

The AMA has announced the employment of Bozell and Jacobs, Inc., Chicago, as its public relations counsel.

The PR firm, according to AMA's announcement, will assist the public relations department in the "general conduct of its program." Story is that one of the agency's principal objectives will be to wage war on the proposed inclusion of disability insurance under social security (see "News Briefs," HOSPITAL TOPICS, September, 1955).

BRIEF BRIEFS

Heard at the AHA convention—a report that a group of west coast hospitals is planning to issue a basic list of standard charges which they have agreed upon for more than 80 common hospital procedures...With the death of Rep. John D. Dingell (D., Mich.), national compulsory health insurance lost its strongest supporter in Congress. Rep. Dingell had planned to start a new drive for its passage in 1956, and also for passage of his bill providing for government-paid hospitalization for recipients of social security payments ...Volume VII of "American Foundations and Their Field" has been released by American Foundations Information Service, New York City. Data is presented on 4,162 foundations—166 of which list health and medicine as their primary field of interest.

Gordon W. Marshall

Calendar of Meetings

OCTOBER

1- 6 American Academy of Pediatrics
Palmer House, Chicago

3- 7 American Association of Medical Record Librarians
LaSalle Hotel, Chicago

5- 7 Montana Hospital Association
Sidney, Montana

6- 7 Mississippi Hospital Association
Hotel Buena Vista, Biloxi

10-15 College of American Pathologists and American Society of Clinical Pathologists, Drake Hotel, Chicago

11-12 South Dakota Hospital Association
Yankton, S. Dak.

12-13 Indiana Hospital Association
Student Union Building, Indianapolis

13-14 Nebraska Hospital Association
Cornhusker Hotel, Lincoln, Neb.

17-18 Oregon Association of Hospitals
Gearhart Hotel, Gearhart, Oregon

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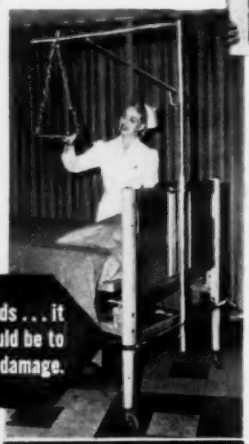

CHICK any-bed monkey bar

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18-21 American Dietetic Association
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19-20 Washington Hospital Association
Davenport Hotel, Spokane

20-21 Operating Problems for Small Hospitals Institute, Hilton Hotel, Albuquerque

22-28 American Occupational Therapy Association, Sheraton-Palace Hotel, San Francisco, Calif.

25-26 Colorado Hospital Association
Cosmopolitan Hotel, Denver, Col.

26-28 California Hospital Association
San Diego Hotel, San Diego

29-30 American College of Osteopathic Hospital Administrators Annual Meeting, Statler Hotel, Washington, D.C.

30-Nov. 2 American Osteopathic Hospital Association, Hotel Statler, Washington, D. C.

30-Nov. 4 American College of Surgeons
Conrad Hilton Hotel, Chicago

NOVEMBER

7- 9 Maryland-District of Columbia-Delaware Hospital Association, Shoreham Hotel, Washington, D.C.

7- 9 Association of Military Surgeons of the U. S., Hotel Statler, Washington, D. C.

7-11 Institute on Dietary Department Administration, Benjamin Franklin Hotel, Seattle, Washington

10-11 Virginia Hospital Association
Hotel Roanoke, Roanoke, Va.

10-11 Kansas Hospital Association
Topeka, Ka.

13-15 Michigan Hospital Association
Pantlind Hotel, Grand Rapids, Mich.

13-17 American Surgical Trade Association
Statler Hotel, New York City

14-17 Southern Medical Association
Houston, Tex.

14-18 American Public Health Association
Municipal Auditorium, Kansas City

14-18 Accounting & Business Practices for Small Community Hospitals
Benjamin Franklin Hotel, Seattle

16-18 American Association of Blood Banks
Palmer House, Chicago

17-19 Arizona Hospital Association
Santa Rita Hotel, Tucson, Ariz.

19-21 American Surgical Trade Association
Semi-Annual Meeting and Technical Exhibit, Conrad Hilton Hotel, Chicago

21-22 OR-CSR Institute, Battenfeld Auditorium University of Kansas Medical Center, Kansas City, Kan.

29-Dec. 2 AMA Clinical Session
Boston, Mass.

DECEMBER

1- 2 Illinois Hospital Association
Springfield, Ill.

5- 8 American College Hospital Administrators 11th Fellows' Seminar, Evanston, Ill.

12-14 Missouri Hospital Association
Hotel Jefferson, St. Louis, Mo.

12-14 American Academy of Obstetrics-Gynecology, Conrad Hilton Hotel, Chicago

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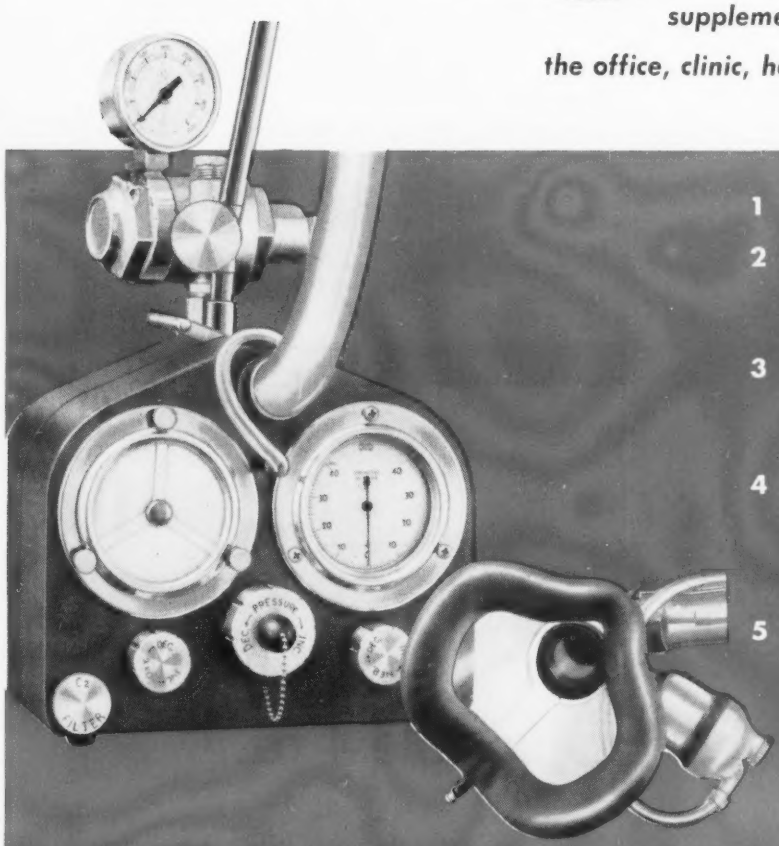

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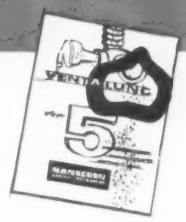

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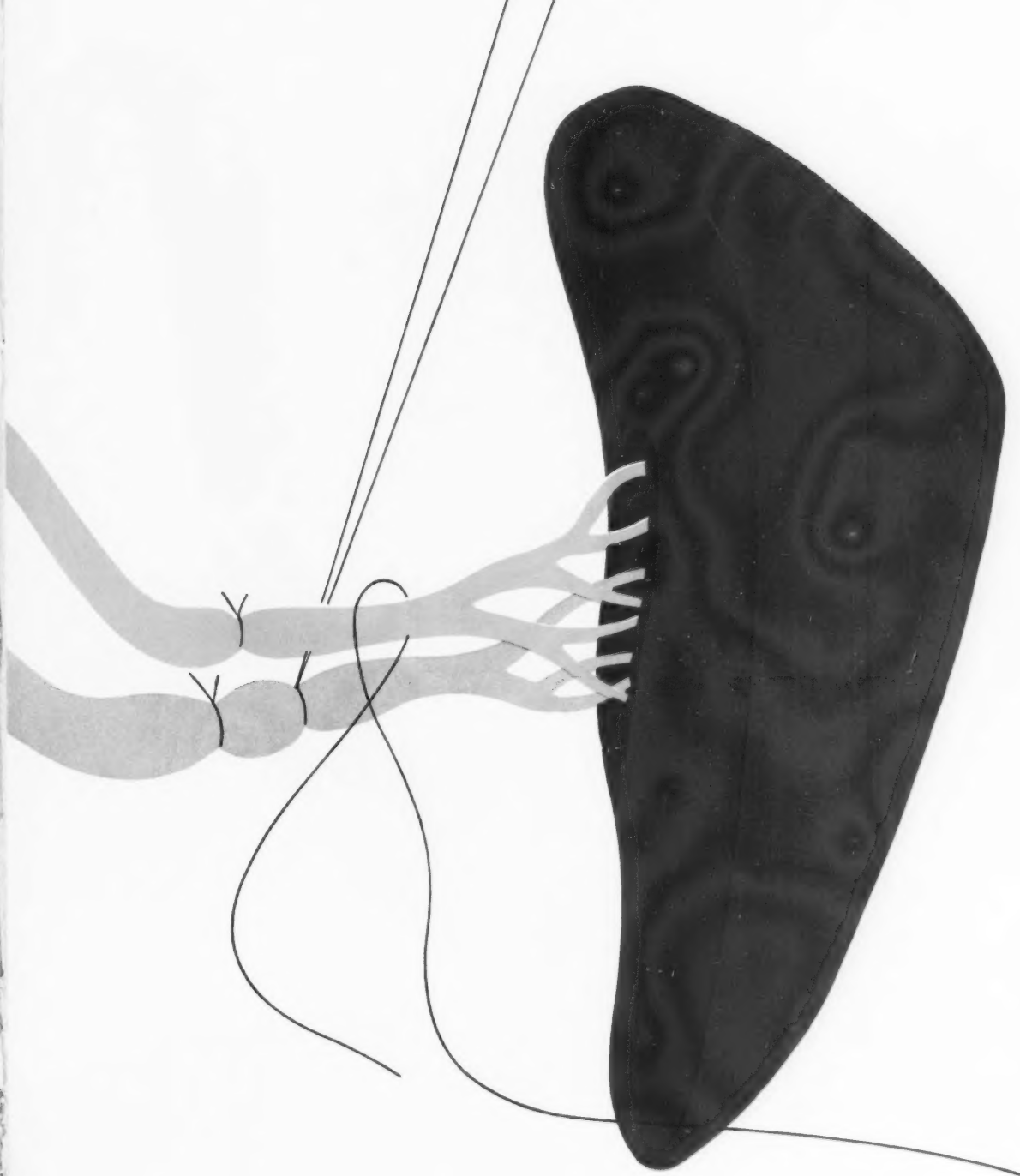

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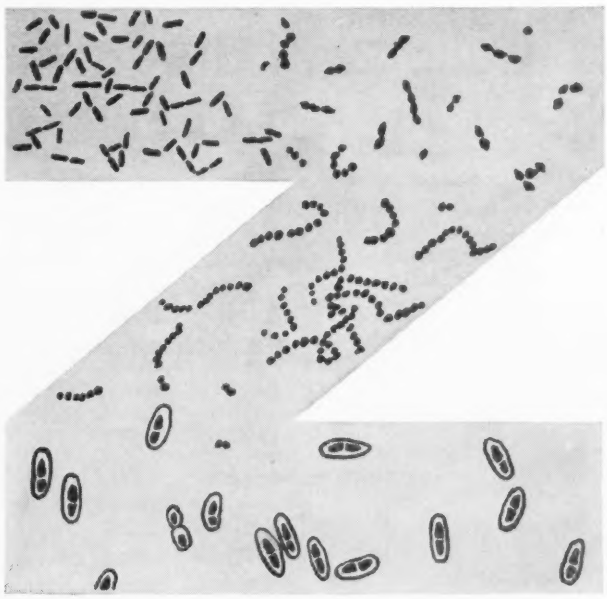

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Above: Lyon H. Appleby, M.D. (l.), Vancouver, B.C., president, Canadian section, and Arnold S. Jackson, M.D. (r.), Madison, Wis., president, United States section, are shown with Vice Adm. Ross T. McIntire, M.C., USN (ret.), Chicago, executive director of the organization.

International College of Surgeons Convenes

● *More than 4,000 persons from North and South America, Asia, and Europe, attended the 20th annual congress of the United States and Canadian sections, International College of Surgeons, in Philadelphia September 12-15. Here are abstracts of some of the important papers.*

Blames Sleeping on Abdomen For Feet Deformities

Flat Feet, Pigeon-toes Traced To Common Sleeping Position

Flat feet or pigeon-toes in infants may result from sleeping on the abdomen during the first few months of life, when babies are unable to turn.

Babies with medial torsion and pigeon-toes sleep in a knee-chest position, with knees up under them and hips up in the air. Their weight comes on their feet, which are turned in. At other times they may sleep with legs extended but with feet turned in. Babies with lateral torsion and flat feet sleep on the abdomen with their legs abducted 90° into the frog or "spread-eagle" position.

Alternating the baby's position can help prevent these deformities. The best position in which to sleep would be on the side. If the infant is started on his side immediately after birth, he does not become accustomed to another position. A baby blanket may be rolled up like a log and used to support him. He should be alternated from side to side after each feeding.

For correction of the deformities, we teach mothers to do simple exercises—to rotate the legs medially and to turn the forefoot down in plantar flexion and in adduction, and to invert the heel and restore an arch to the foot. We recommend spending 10 minutes twice a day on the corrective exercises. The child also wears one of the many kinds of "swung-in" shoes on the market today.

Ninety percent of all feet will respond to this treatment if it is carried out regularly.—**Joseph H. Kite, M.D.**, Assistant Clinical Professor of Orthopedic Surgery, Emory University School of Medicine, Atlanta, Ga.

Living Costal Cartilage Used In Arthroplasty of Hip Joint

Method Seems Effective In Five Cases Studied

The ideal medium for arthroplasty of joints, from a physiological and functioning viewpoint, would be a living tissue. The most natural and efficient would be hyaline or articular cartilage.

We developed a mold shaped to the contour of the femoral head, buried it (with its cartilage implant) in the left lower abdominal wall for nourishment, removed it four months later, and performed arthroplasty of the hip joint. The implant was removed from the mold, tailored, placed over the femur head, and secured with a purse-string ligature of chromic catgut about the neck. The head was reduced and routine closure carried out.

Postoperatively, the affected lower extremity was placed in balanced suspension, with hip in slight flexion and marked abduction for four weeks.

There have been only five cases to date. The first patient, operated upon less than three years ago, is working regularly as a practical nurse, with good function of the affected hip and no pain.

The method would seem applicable also in arthroplasties of other joints, such as the knee and elbow.—**John J. Flanagan, M.D.**, South Orange, N.J.

Rubber Splint Effective As Graft Transfer Agent

Distributes Pressure of Dressings To Every Tissue Space

A rubber splint, which we call Dermatape, has proved effective as a transfer agent for grafts from donor site to host bed and as a pressure-distributing agent, because its molecular structure is comparable in size to the cellular and tissue space structure of the skin.

Rubber lends itself well to the construction of a tape which will perform all desirable duties of a skin transfer agent. The tape is pliable, can be easily sterilized by immersion, can be attached mechanically to the dermatome, solves the problem of "handleability" of the graft, permits the graft to be removed from the splint where desired absolutely free of cement, and can be quickly reapplied to the graft after necessary suturing in some cases.

Most important is that the tape, because of its molecular structure, performs almost perfectly the microscopic distribution of the gross pressure of gauze dressing to every tissue space, evenly and uniformly.—**John D. Reese, M.D.,** Chief, Department of Plastic Surgery, Philadelphia General Hospital, and Clinical Professor of Plastic Surgery, Jefferson Medical College.

Radioactive Phosphorus Simplifies Diagnosis of Cancer

Aids in Telling Malignancies From Non-Malignancies

The use of radioactive phosphorus has simplified the differentiation in diagnosis between cancer and nonmalignant lesions in the stomach and esophagus.

Intelligent use of this method in combination with conventional methods, such as x-ray and endoscopic study, smear tests and others, permits us to obtain a more accurate diagnosis of cancer in the alimentary tract.

The technic is especially valuable in cancer originating in ulcer, in which the extent of lymph nodes and adjacent tissues to be removed is always a problem of surgeons.

The diagnosis was 100 percent correct in 53 cases with malignancy in the esophagus or of the opening to the stomach. Seventeen cases with benign lesions were ruled out. In 58 cases of cancer of the stomach, 56 (96 percent) were diagnosed correctly preoperatively. There was a 100 percent record in diagnosing 48 cases as nonmalignant.

The technic is also effective in discovering affected regional lymph nodes, so that they may be removed along with the cancerous growth.—**Komei Nakayama, M.D.,** Head, Department of Surgery, University of Chiba, Japan.

New Technics Give Added Safety To Brain Surgery in Children

Injection of Anesthetic Helps Lower Risk

An important factor in safe brain tumor surgery in infants and children is the reduction of abnormally high pressure inside the skull—very common in these lesions—to atmospheric pressure by inserting small plastic tubes into the water-bearing pockets of the brain and spine.

These tubes—as small as the average lead of a pencil—are inserted through small needles into the appropriate locations and then connected to a water spigot type of outlet which turns on and off to reduce pressure inside the skull.

We have replaced inhalation anesthesia with the administration of sleep-inducing drugs directly into the blood stream. The anesthetic agent is slowly injected into the vein of the arm or ankle through a small needle or tiny plastic tubing inserted through a needle such as has been customarily used for the injection of many drugs.

Tubes in the mouth, throat, and windpipe have been eliminated, so that postoperative pneumonia and anesthetic shock, often serious complications, seldom develop.

The noninhalation method has been used at the Jefferson Hospital in more than 3,000 cases, with a definite, appreciable lowering of the operative risk.

A method also has been developed for the rapid controlled replacement of blood which is necessarily lost during the long brain operations for tumors. A new pumping system, hooked into the syringe which supplies the anesthetic fluid, also provides blood as it is needed.—**Rudolph Jaeger, M.D.,** Professor of Neurological Surgery, Jefferson Medical College, Philadelphia.

All Surgery 'Emergency' In East Pakistan Hospital

Achieve Low Mortality Rate Under Difficult Conditions

There were no privately owned medical institutions in East Pakistan, aside from a few dispensaries, until the Medical Mission Sisters began a small hospital in Mymensingh, the largest district.

The people were suspicious of hospitals, which had become, in their minds, a place where one went to die. Poor economic conditions, poor means of communication, and distances separating facilities had contributed to the delay in getting patients to hospitals, with the result that when they finally did get there, they were often in such bad shape that they died despite heroic efforts.

Our hospital increased from 20 to 50 beds within four months. Soon 90 percent of our admissions were surgical.

(Continued on next page)

Below: New color TV camera, developed by the Radio Corporation of America especially for medical use, was used for a closed-circuit telecast. W. G. Nichols, M.D., (r.), chief, surgical services, VA hospital, Philadelphia, prepares for operation. Elizabeth McAleese (l.), operating room supervisor, assisted Dr. Nichols.

Above: Moses Behrend, M.D. (l.), chairman of the assembly, is shown with John V. Blady, M.D., clinical professor of surgery, Temple University School of Medicine, Philadelphia; Manuel Riveros, M.D., Asuncion, Paraguay, vice-president, Paraguay section, International College; and Komei Nakayama, M.D., Chiba, Japan, secretary, Japan section. See page 15 for the abstract of Dr. Nakayama's paper.

INTERNATIONAL COLLEGE Continued

The hospital is a long, low, shed-type building, with an asbestos roof, plasterboard partitions, bamboo ceilings.

Our typical team for major surgery in the operating room included a sister anesthetist (who was also the nursing superintendent), myself as the surgeon, one Bengali sister as my assistant, and another as my scrub nurse.

Almost 5,000 operations were performed in the first five years, one-third of which were majors. Our over-all mortality rate is only 0.3 percent.

Each case must be treated more or less as an emergency. The patient is admitted at once, prepared in the simplest manner possible, and operated as soon as possible. Nine-tenths of our cases would have been classified in the States as too poor risks to tackle.

Because of the condition of the patient and our own setup, we are forced to use chiefly drop ether, spinal, or local anesthesia. The people are sensitive to small doses of spinal anesthesia.

Below: Sister M. Benedict, former Philadelphia surgeon now at a hospital in East Pakistan, is shown with Arnold S. Jackson, M.D. (l), Madison, Wis., president, United States section, and Henri Welti, M.D., consulting surgeon, American Hospital, Paris, France, who participated in a panel discussion on thyroid surgery.

Our chief problems postoperatively are dehydration and infection, aside from widespread anemia, avitaminosis, and parasitic infestations. We make our own parenteral solutions with great difficulty.

Cases are mostly abdominal, plastic, and bone surgery, and surgery following obstetrical complications.—**Sister M. Benedict,** Dacca, Pakistan; Chief Surgeon, Holy Family Hospital, Rama.

Simple Pump-Oxygenator Used For Heart Bypass in Dogs

Made of Percolator And 2,000 cc. Beaker

A simple, practical pump oxygenator has been successfully used to bypass the heart and lungs of 25 dogs for 15 to 25 minutes. Cardiotomy in dry field was performed, permitting visualization of the interior of the right atrium or ventricle.

The apparatus consists of a double pump, oxygenator, tygone tubing for extracorporeal circuit, and polyethylene tubes for cannulas.

The oxygenator is made of an 8,000 cc. percolator and a 2,000 cc. beaker. The percolator, which stands in the beaker, has an opening on the lower end. The recipient, with numerous perforations at its bottom, is joined loosely to the upper end of the percolator by a 1" high ring with small indentations. The ring, sprayed with Antifoam, serves both as a primitive bubble-breaker and escape valve.

When the beaker is filled with 1,500 cc. of fresh arterial blood and 300 cc. of plasma expander, some will pass into the lower third of the percolator to equalize levels. When oxygen is forced into the bottom of the percolator by an intranasal oxygen tube, a steadily rising aggregate of blood oxygen foam is produced within the upper two-thirds of the percolator.

The bubbles, after oxygenating the descending venous blood, finally are either broken by the stream from the recipient or disintegrated when touching the ring treated with Antifoam, thus eliminating carbon dioxide and superfluous oxygen from the system.—**George Schimert, M.D.,** Resident in Thoracic Surgery, University of Maryland School of Medicine and Hospital, Baltimore.

Soundproofing the Hospital

By E. S. Graybill*

● Unnecessary noise is still a problem in many hospitals, particularly old ones in which the nerve-racking task of keeping the institution out of the red seems endless. Many of these buildings were constructed when the science of noise abatement was in its infancy. Their plaster ceilings and walls, hard-surfaced corridors, and glass partitions are breeders of noise—that is, they contribute to the generating of noise by sound reflection.

Many hospitals still use converted dwellings, such as old mansions, which, when shorn of their plush drapes, deep carpets, and upholstered furniture in the interest of cleanliness and efficiency, become veritable sound boxes.

Today, sound-conditioning in new structures, particularly hospitals in which noise can be lethal, or at best a nuisance, is a must. Few such buildings are planned nowadays without consideration of the noise factor.

But what about the existing hospital which wishes to put a quietus on noise, without great expense and without unduly interrupting hospital routine? How should you go about it? How can the best results be obtained for the least money?

The first step, of course, is to determine how much noise exists, what type it is—high, medium, or low frequency—and where the most noise originates—corridors, waiting rooms, kitchens, operating rooms, convalescent rooms, or patient rooms.

SELECTION OF MATERIAL

Next comes the job of selecting an acoustical material to cover a sizeable area—usually the ceiling, sometimes one or more walls, and in extreme conditions walls and ceiling.

Commercial acoustical materials are made in a variety of types, ranging from the familiar foot square tiles of perforated fiberboard or fissured mineral wool to heavy-duty units with a thick pad of mineral or glass wool faced with perforated metal, plastic, hardboard, or asbestos sheet.

Obviously, no one type is best for every use. The size and shape of the room, the over-all noise level, the character of the noise and the amount of absorption needed, humidity conditions, fire resistance, light reflection, and how often the material will be cleaned and repainted should all be considered and evaluated.

*Mr. Graybill is president, Acoustical Materials Association.

These questions seldom can be answered by the layman, but fortunately the solution is easy in most cases. Practically all the larger communities and many of the smaller ones have acoustical engineers, or men who are trained in the art of measuring sound and know how it can be reduced. The representative of any one of the 14 members of the Acoustical Materials Association will survey your problem and make recommendations gratis.

HOW MUCH WILL IT COST?

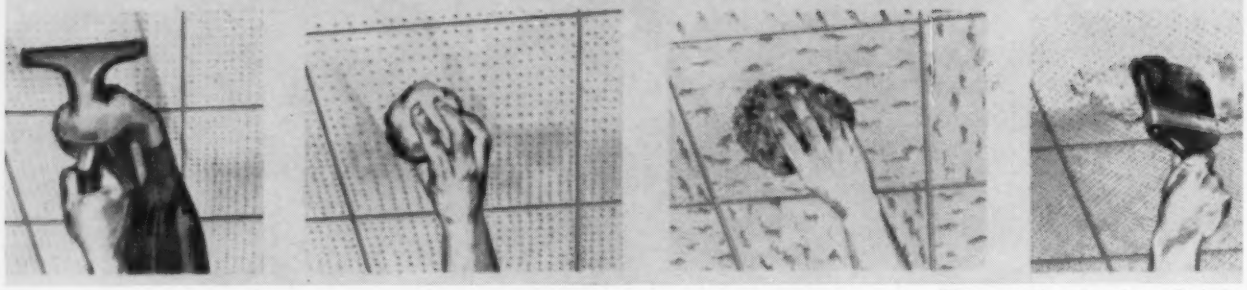
The cost? This will depend on the quantity and quality of acoustical material required to solve a particular problem and the method of installation. It is safe to say, however, that low-cost material in most cases will do an

(continued on next page)

Below: Soundproofed walls and ceilings keep noise at a minimum in this busy hospital corridor.

Picture courtesy Johns Manville Sales Corp.

METHODS OF CLEANING ACOUSTICAL MATERIALS



Picture courtesy Armstrong Cork Co.

Above: Acceptable and easy methods of cleaning perforated acoustical materials include (l. to r.): vacuum cleaning; using ordinary wallpaper cleaner; washing with a dampened sponge; and suds cleaning. Repainting is also possible.

effective job and absorb ordinary sound in the low or medium-frequency ranges, such as clatter of dishes, voices, telephone bells, etc. If, however, you are confronted with a high-frequency noise probelm, or one of noise transmission through walls, the solution may be something else, particularly in the case of sound transmission.

Because there are so many variables, it is difficult to state a definite installed price per foot. However, a range of 30 to 80 cents a square foot can be used as a rough measuring stick. These figures can vary from 50 to 100 percent, depending on size of installation, distance, whether the installation is made during regular working hours, type of material, and other factors.

What is noise, anyway? It has been defined simply as unwanted sound. There are more technical definitions, but that will suffice. Any sound under ordinary circumstances consists of concentric waves which travel 1,200 feet per second. Out-of-doors, sound quickly loses its energy and is heard "pure." Only the original sound itself is heard. But when sound strikes an object, such as the walls and ceiling of a room, it is reflected many times, and not only the original sound but its numerous reflections are heard as a confused pattern. In an area like a hospital corridor, sound will reverberate and create a miniature sea of noise, a disturbing turbulence.

Acoustical tiles absorb up to 90 percent of sound striking them, preventing it from bouncing back into a room and thus creating an atmosphere in which only the original sound is heard. They do not reduce the loudness of the sound at its origin, but stop it from spreading.

WHERE TO USE MATERIALS

The next step in employing sound-conditioning materials is to pick out the rooms or places to be acoustically treated. What are the most irritating and noisy spots in the hospital, and where is acoustical treatment a must? Corridors, stairwells, workrooms, labor rooms, nurseries, and visitors' reception rooms generally benefit from sound-conditioning.

Corridors are usually noisy. Patients' rooms, reception desks on floors, and workrooms adjacent to the corridor all send noise into the corridor, which acts as a megaphone in amplifying sound. Sound waves have the ability to travel around corners, and the problem is to stop this noise from spreading too far. The use of acoustical materials on the ceiling of corridors will, in most cases, reduce the noise level so it is no longer distracting. Perforated acoustical tile can be effectively used here at low cost. It is also easy to clean and repaint when necessary, if care is taken not to fill the perforations. An acoustical ceiling can be repainted many times without loss of effectiveness.

Stairwells form avenues in which sound can travel from one floor to another. It is important that these areas be acoustically treated so that noise from one floor will not spread to others.

Workrooms, such as those in which food is distributed, cleaning rooms, pharmacy rooms, etc., are a source of noise. These rooms, like the corridors, should be acoustically treated.

Labor rooms and nurseries can be considered about the most noisy in a hospital, except, perhaps, the boiler or compressor room. Perforated acoustical tile will also serve to good use here.

In most hospitals the reception room is treated with a decorated fissured tile which also presents a pleasing decorative effect. The location of this room will usually determine the need for treatment. If the reception room is directly off the main corridor, acoustical treatment is important. However, if it is fairly isolated from the main building, there may not be too much need for treatment, except for decorative effect.

The use of acoustical materials in patients' rooms is highly recommended, but when cost is a critical factor, these rooms may be left until later. While many patients' rooms can be a source of noise, certain furnishings in the rooms can serve as sound-absorbing materials, such as mattresses, chairs, and drapes.

A reasonable amount of noise reduction can be achieved at very little expense by educating hospital personnel on the necessity for quiet, the use of rubber casters and of rubber-coated trays in utility rooms, the need for wearing rubber or composition-soled shoes when feasible, the use of door stops and resilient floor coverings, and the judicious use of drapes.

The type and degree of noise should be determined first. Then an acoustical tile that qualifies as to effectiveness, maintenance, and appearance should be selected. Choose the locations for treatment in the order of their noise irritation, and install the material as budgetary conditions allow. The final step is to educate hospital personnel to be quiet.

American Congress Of Physical Medicine Meets in Detroit

Above: Three members of the Michigan Crippled Children Commission attended the Detroit meeting. All orthopedic nurses and physical therapy consultants, they are (l. to r.): Mrs. Sue Brook, R.N., Grand Rapids regional office; Hildegarde Kummer, R.N., Marquette office; Mrs. Elizabeth O. Compson, Lansing regional office.

Long-Term Respirator Patients

Physical Therapy Methods Used

In treating patients with long-term paralysis of respiratory muscles, emphasis is placed upon nutritional problems, medical problems as related to their impaired neurological residuals, and impaired respiratory capacity.

In our Respiratory Center, we have had the opportunity of seeing patients who have had such impairment for up to six or seven years. The vital capacity of most of these patients on admission has varied from a low of 150 cc. to a maximum of 900 cc. Many have had indwelling tracheotomy tubes. In many of these, the involvement is so severe that the only muscles they can control are those of the face and neck.

To increase respiratory capacity, physical therapy measures are employed, such as chest compression, individual massage, and stretching of the intercostal muscles. Attempts are made to increase the tone and power of the neck muscles to give them power to elevate the thoracic cage.

A re-defining of rehabilitation goals is required, since the severity of these disabilities involves serious consideration of the psycho-social factors and economic cost involved in all long-term patients.—**Harold N. Neu, M.D.,** Professor of Medicine, Creighton University School of Medicine and Director of Rehabilitation, Creighton Memorial St. Joseph's Hospital, Omaha, Neb.

Rural Physicians Study Physical Medicine At University of Buffalo

Organize Lectures and Clinics

Physicians in rural hospitals now are better equipped to help patients needing physical medicine and rehabilitation, because of a postgraduate training program set up by the University of Buffalo (N.Y.) School of Medicine.

In 1954 the medical school organized a series of lectures and clinics, held one day a week for 20 weeks. Candidates were physicians who permanently reside in small communities in the vicinity.

One of the purposes of the program was to train these physicians to head existing rehabilitation organizations in their communities or set up new groups. As a result of the training program, they were better able to help those patients needing physical medicine technics in their homes and to select more complicated cases to send to larger centers for treatment.

This year the university plans to set up a course for physicians in private practice in larger cities—**Henry V. Morelewicz, M. D.,** Physical Medicine and Rehabilitation Center, E. J. Speyer Memorial Hospital, Buffalo, N.Y.

Below: Frank H. Krusen, M.D. (l.) and Jerome Tobis, M.D. have a chance to relax after delivering their talks at one of the morning sessions. Dr. Krusen is head of the Section on Physical Medicine and Rehabilitation, Mayo Clinic, Rochester, Minn., and is treasurer of the American Congress of Physical Medicine. Dr. Tobis is director, Department of Physical Medicine and Rehabilitation, New York Medical College, Metropolitan Medical Center.

Special Pediatric Problems Aided by Physical Medicine

70 Percent of Newborns Show Some Joint Disability

Physical medicine technics that will relieve muscle tensions, increase joint mobility, and improve circulation can be effective in many pediatric problems.

Our earliest use of physical medicine occurs in premature care, when oxygen, heat, and humidity are employed. Many newborns need diagnosis and treatment by methods of physical medicine. A survey of 200 newborns showed that 70 percent had limitations of range of motion of shoulder and hip joints. Persistence of this may have a bearing on the development of later physical disabilities.

Conditions in older children that have been helped by physical medicine include polio, rheumatic fever and its complications, irritability, postinfectious convalescence, adolescent skin conditions, and the effects of accidents.

Conditions in infants involving muscle spasm with or without circulatory disturbance have been helped by physical medicine technics. Among these are colic, torticollis, pylorospasm, and congenital dislocation of the hip. We have found that hydrotherapy sometimes has surpassed surgery and that patients are less tense after recovery. It is hoped that further work in this field will lead to a new form of preventive pediatrics.—**Arthur W. Fleming, M.D.,** Assistant Clinical Professor of Pediatrics, Stritch School of Medicine, Loyola University, Chicago.

(Continued on next page)

Section of Physical Medicine Advocated for Hospitals

Mayo Clinic Reports Gains During Last 20 Years

A section of physical medicine and rehabilitation in a medical clinic should combine programs of teaching, research, and practice. Such a department should have a bed service in the hospital.

The service operated by our section has an average census of 30-40 patients. Last year, 12.4 percent of all patients coming to the Mayo Clinic were referred to the section for diagnosis and treatment.

During the 20 years the section has been in existence, the staff has been expanded from 15 workers to 120 full-time and 11 part-time workers. Approximately 650 physical therapists and 394 physicians have been trained there.

When properly organized and conservatively developed, a section of physical medicine and rehabilitation can play a very important part in the activities of a general medical and surgical clinic.—**Frank H. Krusen, M.D.,** Professor of Physical Medicine and Rehabilitation, Mayo Foundation, and Head, Physical Medicine and Rehabilitation Section, Mayo Clinic, Rochester, Minn.

Above: Stopping for a chat just before a meeting of the executive council are Frances Baker, M.D., San Mateo, Calif., re-elected secretary, and Gordon Martin, M.D., Section of Physical Medicine and Rehabilitation, Mayo Clinic, Rochester, Minn., newly elected president of the Congress.

Patients Report on Usefulness of Glossopharyngeal Breathing

Majority Say Self Confidence Is Increased

When a patient's breathing muscles have been paralyzed, he can learn to breathe using other muscles. Glossopharyngeal breathing is accomplished by pump-like action of muscles in the throat, larynx, and mouth. The result is not a smooth action, but a step-like inspiratory method.

At Rancho los Amigos, Hondo, Calif., about eight out of 150 patients with respiratory paralysis learned this type of breathing spontaneously. A survey was taken of patients, using the method, to determine their emotional and physical reactions. They were questioned about the ease of learning, the security it offered, appearance, and effects on body function. Most answers were positive. Patients said that while they felt the appearance was not good, they

Above: Discussing one of the scientific sessions they have just attended are (l. to r.): H. D. Bouman, M.D., Head of the Department of Physical Medicine, University of Wisconsin Medical School and editor, *American Journal of Physical Medicine;* Robert C. Darling, professor, physical medicine and rehabilitation, Columbia University College of Physicians and Surgeons, New York; Leo Rosenberg, chief, Department of Physical Medicine and Rehabilitation, VA Center, Dayton, Ohio.

felt more secure knowing that they could breathe if the power failed in the respirator. Some patients stated that the method helped the cough reflex and that they could speak louder.

One deterrent is that patients seem to feel that they are hopeless cases when glossopharyngeal breathing is suggested. These people should be reassured that this type of breathing will help in regaining normal breathing.

The attitude of the patient toward the teacher and the length of time since the onset of the disease affected the patient's adaptability.—**Clarence W. Dail, M.D.,** Associate Professor, Physical Medicine, School of Medicine, College of Medical Evangelists, Los Angeles.

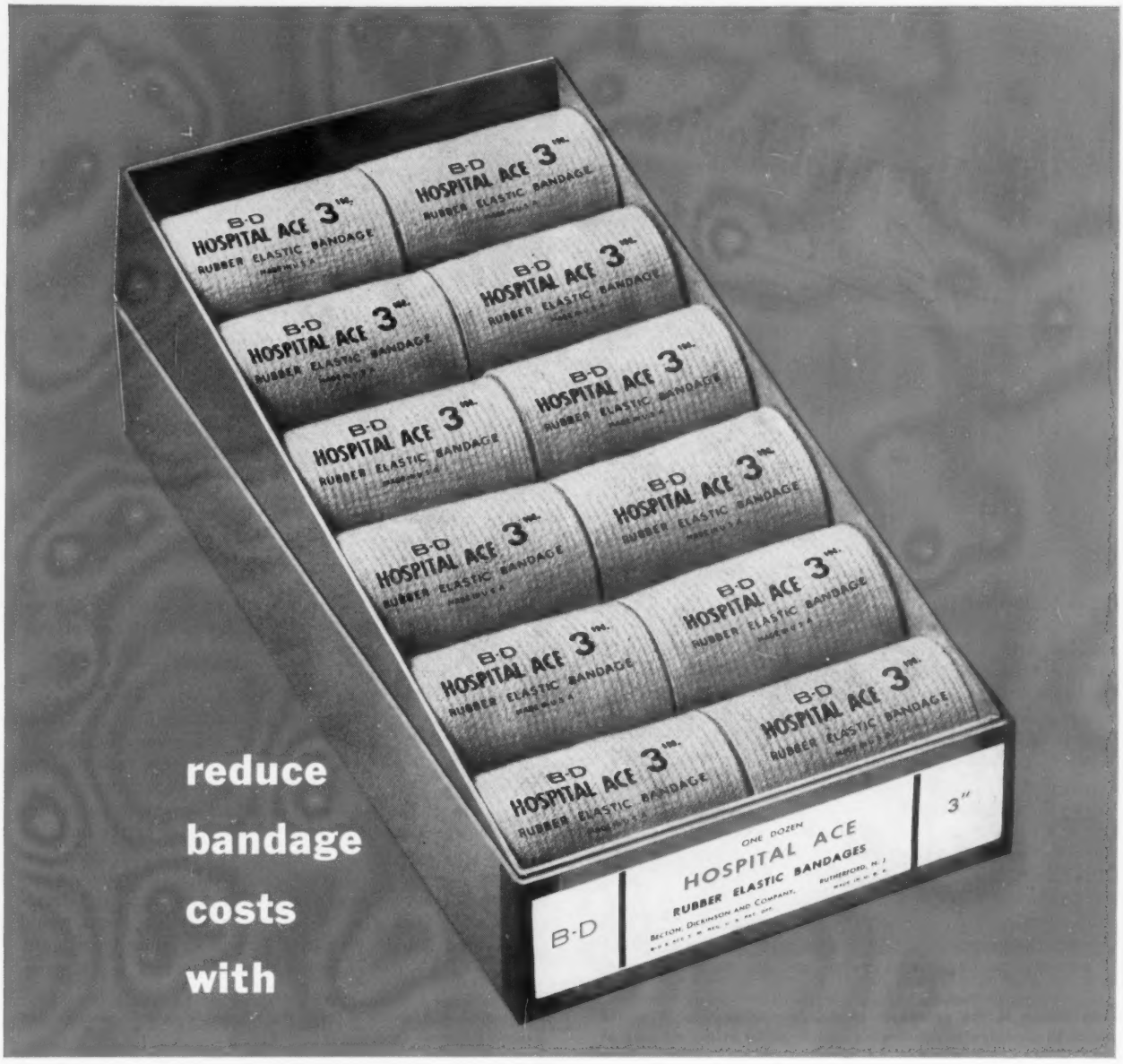
Patients' Goals Appraised at Rehabilitation Center

Survey Shows Pattern for Ideal Patient

The attainment of functional activities not previously performed is the goal of a patient beginning a rehabilitation program. Observations made in a community rehabilitation center which services all ages, all social and economic strata, and a wide variety of physical disabilities show that the patient should be appraised on the basis of: (1) preparation—his previous medical treatment and preparation for the rehabilitation process; (2) participation abilities—his physical disability, education, age, social and economic status, willingness; (3) potential relationships with professional team members, and (4) environmental circumstances of the rehabilitation center and home.

Studies made at the center revealed that a higher degree of success was attained by patients referred by a physician rather than an agency. Approximately 85 percent of the patients referred by physicians were successful, 27 percent of the self-referrals were successful, and 20 percent of the agency-referred patients were successful. It was also found that 68 percent of those who paid their own way reached a higher degree of rehabilitation; 56 percent of those whose fees were paid by an agency were successful.

The ideal patient seems to be a fee-payer, 20 to 50 years old, with a short-term disability, grade school or high school education, good family environment, and a high degree of sociability.—**Keith C. Keeler, M.D.,** Director, Rehabilitation Center of Summit County, Inc., Akron, O.



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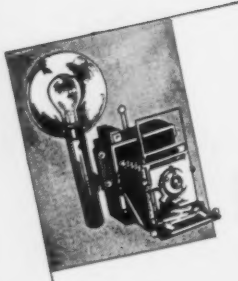


Hospital Topics ..... Goes Calling

. . . on the FCDA Headquarters
Battle Creek, Mich.

Above: Margaret Schafer, chief nurse, Health Office of the FCDA, inspects the autoclave to be used in the central supply department of the improvised hospital. It is built on the principle of an oversized home pressure cooker and is fired by a gasoline unit or bottled gas.

● The 70 critical target areas in the United States now have only about 650,000 hospital beds. If 42 of these areas were hit with atomic bombs, the Federal Civil Defense Administration estimates that over 13,000,000 casualties would result. Of this number about 8,200,000 would immediately survive and one-half of these would need hospitalization. The 200-bed improvised hospital is the FCDA's answer to the shortage of hospital facilities in case of a natural disaster or enemy attack.

First displayed at the 1954 AHA convention in Chicago, the hospital is now set up as a permanent display in one section of the former Percy Jones Army Hospital, Battle Creek, Mich. The building was taken over last year as the national headquarters of the FCDA.

The supplies and equipment of the hospital weigh about 13½ tons, occupy about 1,800 cubic feet, consist of about 450 separate packages and crates, and can be transported in a single van. The unit can be set up in a school, church, or public building in about four hours by three professionals and semi-trained auxiliaries with 30 untrained volunteers helping.

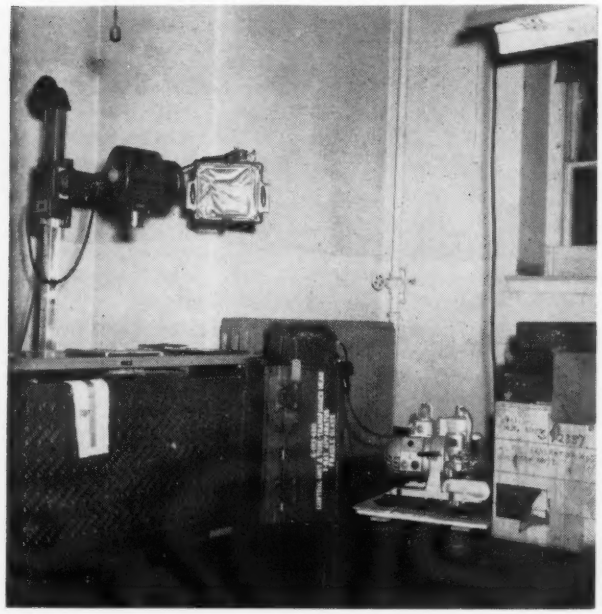
Patterned after the 60-bed Mobile Army Surgical Hospital used with great success in the front lines in Korea, it includes 292 different items of equipment. Besides 10 wards of 20 beds each, there are complete facilities for three operating rooms, central supply department, pharmacy, laboratory, and x-ray. In actual operation, casualties would be registered and sorted in the foyer of the building and then sent to the appropriate ward or operating room.

There are 200 folding cots, surgical instruments, anesthesia equipment, and enough drugs, medicines, and dressings for the first 36 to 48 hours of operation. Items would be replaced from the nearest federal or state warehouse.

The FCDA's medical stockpiles are stored in 21 ware-

Below: Visitors to the permanent display improvised hospital at the national headquarters are shown this exhibit set up at the entrance of the hospital. It graphically shows the hospital in actual operation and presents statistical data.

FEDERAL CIVIL DEFENSE ADMINISTRATION
THE IMPROVISED HOSPITA
The mission of the FCDA improvised hospital is to provide early hospitalization for seriously ill and injured casualties as close to the stricken area as possible for life-saving, initial and reparative surgery



Left: The x-ray apparatus has its own generator and transformer. The Land Polaroid system is used, so that the necessity for a darkroom is eliminated. X-ray pictures are ready in 60 seconds.

houses throughout this country and its territories. Officials say 2,500,000 casualties could be cared for, for three weeks.

By June 1956, the FCDA hopes to have close to 1,000 improvised hospitals. Eventually a stock pile of 6,000 will be necessary to care adequately for the entire country. Each hospital costs $22,056.

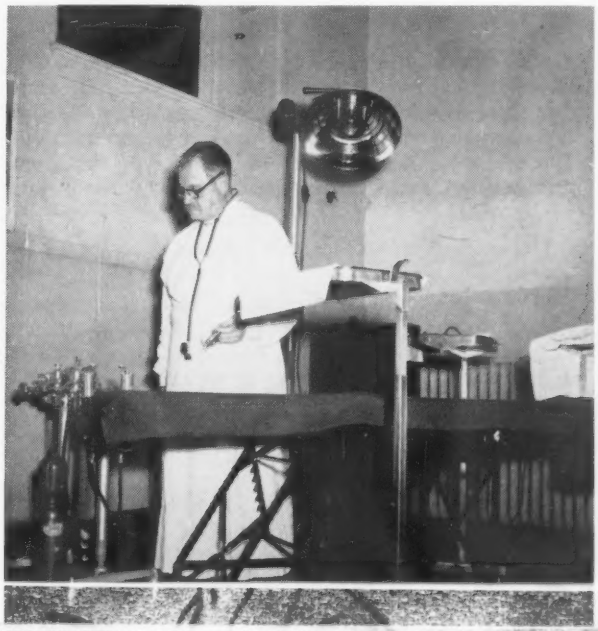
In case of an enemy attack, the FCDA would allocate materials to the states, which in turn would supply local hospitals. Regional offices would have the authority to commit 50 percent of warehouse stocks, while the balance would be under national control for shifting supplies to the area in greatest need. In the case of natural disaster, the line of communication is reversed and the community makes its appeal first to the state, which in turn calls on federal resources through the regional office.

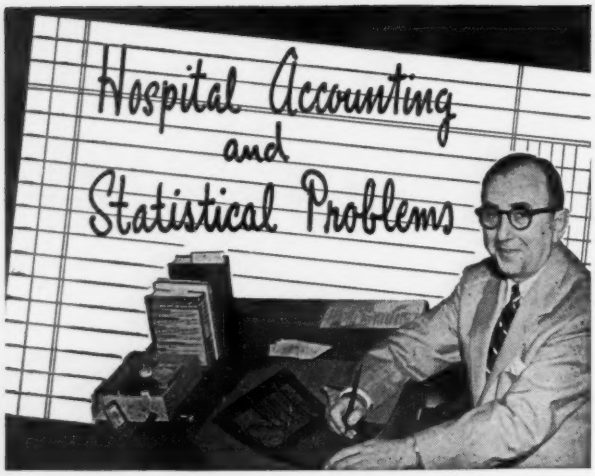
In line with its program of preparing for disaster, the FCDA is setting up a series of courses for nurses. The first Federal Civil Defense Administration Staff College Course for Nurses will be given at the headquarters in Battle Creek, November 16-19. There will be three days of training and instruction in the principles of civil defense especially as they affect the casualty care service. One day will be devoted to outlining the special role of nurses in civil defense emergency casualty care. A similar course will be held in Olney, Md., January 30 through February 1, 1956.

Above: There are 10 wards of 20 cots each. Oxygen tanks are placed at various points throughout the ward. Necessary bedside equipment is placed at a central station.

Below: Gemma Maddalena, R.N., nurse in charge of the personnel health unit, unpacks blankets for use in the reception area. The trunk-like box at the left holds 24 pints of blood.

Below: Three folding operating tables make up the operating room section. Checking the anesthesia equipment is Carlisle Lentz, M.D., director, Casualty Care Division of the FCDA.





By David H. Tarlow, C.P.A.

Senior Partner, D. H. Tarlow & Co.

Hospital Accountants and Auditors, New York City

Q. We have a charter as a voluntary non-profit hospital, and have been operating as such for the past thirty-eight years. We were always under the impression that we were tax exempt, and still believe that we are. However, one of the new members of our Board has advised us that we must file a Federal Income Tax return annually. Can you please advise us as to just what our responsibility is in this matter, and if we have to file a Federal Income Tax return. What form is prescribed for this purpose since obviously the usual corporate form does not apply?

A. All voluntary corporations with the exception of a religious organization must file Federal Income Tax returns. For your guidance we quote the excerpt from the 1954 Internal Revenue Code as it applies to your problem.

EXEMPT ORGANIZATIONS

Under Section 501 (c) (3) of the Internal Revenue Code of 1954, the following organizations are exempt from taxation:

"Corporations, and any community chest, fund, or foundation, organized and operated exclusively for religious, charitable, scientific, testing for public safety, literary, or educational purposes, or for the prevention of cruelty to children or animals, no part of the net earnings of which insures to the benefit of any private shareholder or individual, no substantial part of the activities of which is carrying on propaganda, or otherwise attempting to influence legislation, and which does not participate in, or intervene in (including the publishing or distributing of statements), any political campaign on behalf of any candidate for public office.

Under Section 6033 of the Internal Revenue Code of 1954:

"Every organization, except as hereinafter provided, exempt from taxation under section 501 (a) shall file an annual return, etc. No such annual return need be filed under this subsection by any organization exempt from taxation under the provisions of section 501 (a)—

(1) which is a religious organization described in section 501 (c) (3).

(4) which is an organization described in section 501 (c) (3), if such an organization is operated, supervised, or controlled by or in connection with a religious organization described in above paragraph (1).

The federal government has provided either form 990 or 990A to be used for the annual report.

Since I would gather from your letterhead that yours is not a religious organization, it would appear that you should file a report for your last year as soon as possible to the local Director of Internal Revenue. One of the reasons for this requirement is to assure your organization of being able to advise donors that you are tax exempt and that their donations to your hospital are deductible from their income tax returns. If you lose your tax exempt status, obviously donations to your hospital will not be tax deductible since you would then be considered a profit making organization.

Q. We have just made an arrangement to grant one of our laboratory technicians a scholarship grant for specialized study at the local University. Does this payment have to be added to the recipient's salary and must taxes be withheld from the sum the same as other income received by the technician?

A. The specific scholarship grant you refer to appears to be exempt from taxation and therefore, need not be included in the gross income of the recipient. For guidance we quote section 117, Internal Revenue Code of 1954 referring to scholarships and educational grants.

SCHOLARSHIPS AND EDUCATIONAL GRANTS:

Section 117 of the Internal Revenue Code of 1954.

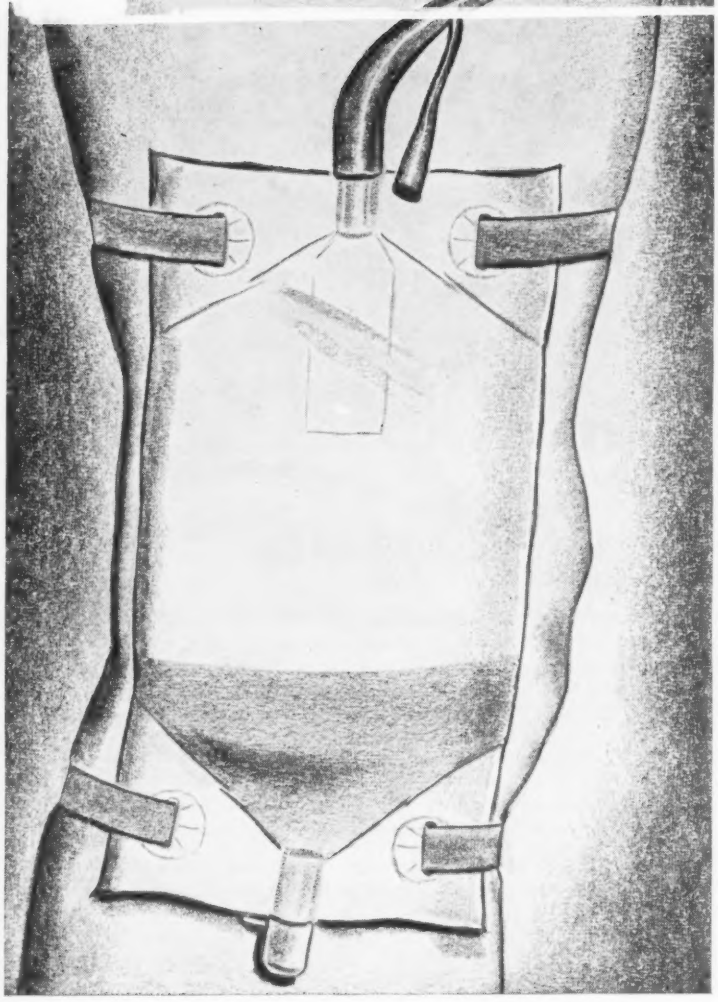
117 (a) "Subsection (a) states that gross income of an individual will not include any amount received for scholarship grant, fellowship grant, or amounts to cover expenses of travel, research, clerical help or equipment incidental to such scholarship.

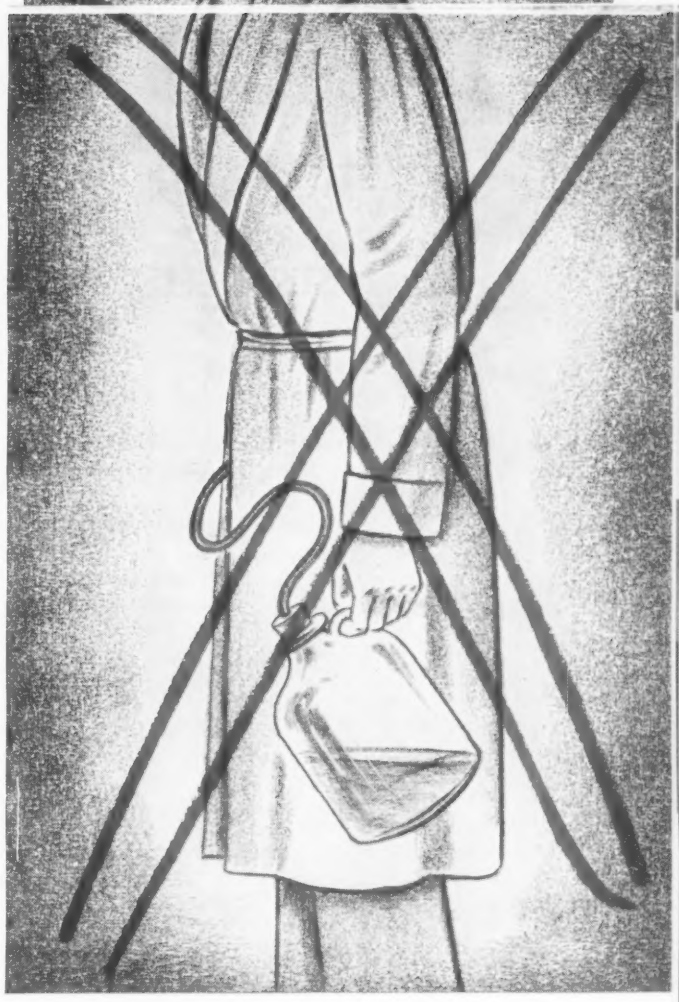
117 (b) (1) Subsection (b) contains limitations as follows: payments received for teaching etc., which is incidental to terms of the scholarship is considered as part-time employment. If such teaching, etc. is incidental to any particular degree (whether or not on scholarships) such services shall **not** be regarded as part-time employment. The above paragraph refers to candidates for degrees.

117 (b) (2) (A) Subsection (b) (2) where individuals are not candidates for degrees, the above subsection (b) (1) applies wherein the grantor of the scholarship is an organization described in section 501 (a) (non-profit institutions) or U.S. or subdivisions thereof.

117 (b) (2) (B) The above exclusion from taxable income is further limited as follows: Sec. 117 (b) (2) (B) The amount of the scholarship or fellowship grant excluded under subsection (a) (1)—above para, in any taxable year shall be limited to an amount equal to $300.— times the number of months for which the recipient received amounts under the grant. This exclusion from income ceases to operate after 36 months income has been received.

The entire Section 117 (b) refers to taxation of income received for teaching, research or other services in the nature of part-time employment.





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Saves nurses from disagreeable work of emptying urine receptacles and cleaning and deodorizing bottles, connectors and tubing.

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CAT. NO.		EACH	PER DZ.	6 DZ. PER DZ.	12 DZ. PER DZ.
1501	*Dispoz-A-Bag*	*$1.25*	*$13.50*	*$12.00*	*$11.25*

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California Blue Cross Tests Simplified Admission Plan

A new method of confirming the eligibility of Blue Cross patients in hospitals now is being tested by Blue Cross of Southern California.

The telephone admission plan, which shortens the process of confirmation by about 48 hours, has been in operation since early last spring and involves 33 Southern California hospitals. Admitting and billing procedures were studied for three years before the test was started.

Briefly, the system works as follows:

The hospital does away with the conventional Blue Cross claim forms. When Blue Cross patients are admitted, it uses its regular forms. At a specified time every day all these admitting forms are collected, and the hospital clerk phones the information in to the Blue Cross office. Each hospital is given a definite hour for its daily phone call. The clerk reports a minimum of information; patient name, date, hour admitted, birthdate, admitting diagnosis, relationship of patient to subscriber, subscriber's name, certificate and group number.

At Blue Cross headquarters the information is taken by a clerk or is recorded on tape as the hospital clerk speaks. The information then is typed directly onto a continuous type claim form.

When the recording device is used, the telephone receiver is lifted when the call comes in and the hospital clerk begins her report. Her conversation is recorded on magnetic tape and is then transcribed by a typist on a claim form.

Occasional mechanical complications during the test have led Blue Cross officials to experiment at the same time with person-to-person phone communication.

According to B. L. Allard, Blue Cross director of internal operation, the success of the new plan is due to the simplified claim form, developed after years of study. Measuring 3½" by 7⅜", it contains four sheets and carbons and has space for every reference needed.

After the admitting information has been typed, the form goes to the master record section where eligibility is checked and recorded on the form. Then it goes to the claims department where benefit eligibility is entered.

The first three sheets then go to the hospital, and the fourth sheet remains at Blue Cross. The hospital then enters its billing information. At this point, the first sheet is mailed to Blue Cross, the second is placed in the hospital's files, and the last one is given to the patient.

A survey is under way among the test hospitals to determine the benefits of the phone system over the old mail process. Early comments from the test hospitals indicate that the experiment is a success. It is planned to extend the system to all Southern California hospitals.

Left: Margaret J. Wherry (l.) administrator, and Kathryn E. Holland, business manager, Hospital of the Good Samaritan, Los Angeles, watch Amy Keimi, Blue Cross supervisor at the hospital, phone in her daily report. Good Samaritan is one of the 33 hospitals testing the system to speed admission procedure and remove hospital responsibility for claim form preparation.

Above: At Blue Cross headquarters Andreé Maines, transcribing typist, wears headphones to receive the admission information from the hospital. Checking the continuous claim form is the originator of the system, B. L. Allard.

Right: One of the next steps at Blue Cross is to confirm membership. Margaret Tanacs, senior record clerk, and John C. Morse, supervisor of the communications department, pull IBM cards to verify membership eligibility.

Below: Margaret Burgess, R.N., claims supervisor, checks the benefits for which the member qualifies. Looking on is J. R. Saurwein, manager of the claims department.

(continued on next page)

Left: Under the new system admission reports received at Blue Cross as late as 1:00 p.m. go out in the afternoon mail. Here Mr. Allard (right) watches Harold Fox get the completed forms out on the same day the information was received.

Below: Front and back of the streamlined claim form. The form contains information for every reference need, takes up a minimum of file space. Developed after years of study, it contains four sheets and carbons, is the world's briefest form.

LINE

HOSPITAL SERVICE OF SOUTHERN CALIFORNIA LOS ANGELES, CALIF.

1 Hosp. Name — Hosp. No. — Date Recd

2 Pt. Name — Day Adm.

3 Adm. Diag.

4 Rel. Code

5 Cont. Code

6 Subs. Name — Cert. No. — Grp. No.

7 Subs. Address

8 Doctor Name — Disch. Day and Hour — No. of Days

9 Final Diag.

10

11 Type Oper.

12 — Surg. Name

13 Anes. Began A.M. P.M. — Anes. Ended A.M. P.M. — Anesth. Name

14 LAB. EXAMS. Show no. of each in proper space: CBC ___ BMR ___ RBC & HEMO ___ / UR ___ EKG ___ SIMPLE SMEAR ___ / WH & DIFF. ___ BL TIME ___ ALL OTHER ___

15 X-RAY EXAMS. Show number of each by area code.

SP 100.4

HOSPITAL BILLING	ALL CHARGES AT STANDARD RATES	CHARGES PAYABLE TO HOSP. BY PT.
1. PRIV. SEMI PRIV. 3 BED WARD		
2. X-RAY EXAMS. (ITEMIZE IN LOWER LEFT CORNER)		
3. LAB. EXAMS. (ITEMIZE IN LOWER LEFT CORNER)		
4. SUPPLIES-SURGICAL ANES. CENTRAL SERVICE		
5. MEDICATIONS, SOLUTIONS AND OXYGEN		
6. OPERATING, CYSTO., CAST OR DELIVERY ROOM		
7. PHYSIO.-HYDROTHERAPY		
8. ANESTHETIST, IF A HOSPITAL EMPLOYEE		
9. TRANSFUSION TRAYS-EXCLUDE BLOOD CHARGES		
10. OTHER (ITEMIZE)		
AUDIT DATE TOTAL		

Blue Cross CLAIM FORM SHEET 1

STD.	50%	(DIAGNOSTIC STUDY AND INDUSTRIAL INJURY EXCLUDED)	APPR. BY STD.	APPR. BY 50%	PREV. SERV.	
		DAYS (DAYS DEDUCTED PREVIOUS STAY			APPROVED DRUGS TO $10, PLUS 50% BALANCE (INCLUDES OXYGEN & EQUIPMENT)	
		MULTIPLE BED ACCOM. (TOWARD PRIV. ROOM			ALL APPROVED MEDICATIONS (OXYGEN & EQUIPMENT)	
		3 OR MORE BED WARD (WARD RATE IF SEMI OR PRIV.)			OB (LESS AMOUNT USED)	
		CBC, UR, BL, CL, SIMPLE SMEARS, RED & HEMO			NURSERY CARE FOR NEWBORN	
		BMR, EKG, INCIDENTAL TO ADMITTING DIAG.			DEDUCTIBLE PER DAY FOR DAYS	
		ALL LAB. EXAMS, (EEG, EMG, PHYSIO & HYDRO-THER. INCIDENTAL TO ADM. DIAG.)				
		TRANSFUSION TRAYS				
		ANESTHETIST IF FULL-TIME HOSP. EMP.				

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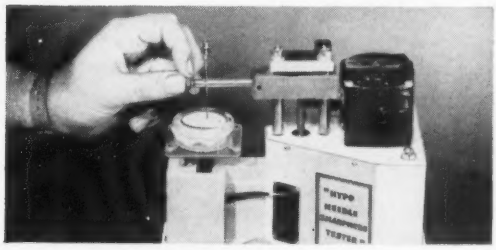

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18-8 stainless steel. Hollow ground, specially sharpened beveled points—factory tested to insure uniform sharpness at all times. Meet Fed. Specs. GG-N-196.

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LUER GLASS TIP LUER METAL SLIP TIP LUER LOCK TIP

Propper CROWN BRAND hypodermic syringes are made of hard, non-corrosive, alkali-free glass, highly resistant to chemical action and to breakage from shock or from sudden temperature changes. Meet Fed. Specs. GG-S-921a.

Barrels and plungers are life-time marked with permanent pigment.

This means a longer lasting, more dependable syringe—a better return on your investment. CROWN BRAND *Syringes cost you less per use.*

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REVIEW OF HOSPITAL

LAW SUITS

By Leo Parker, Attorney at Law

- **Hospitals Cannot Exclude Licensed Physicians**
- **Injured Patients and Guests Cannot Sue if Contributory Negligence is Proved**
- **Three-Year Limit on Malpractice Suits**

● Recently a higher court held that neither officials nor the board of a public hospital can exclude or deny a licensed physician the right to practice medicine and administer to patients in the hospital, even though the physician has violated certain rules laid down by the board, particularly if a state law does not clearly and specifically give the officials or board this authority.

In Albert v. County Public Hospital, 67 N. W. (2d) 244, it was shown that Samuel G. Albert is a physician and surgeon licensed by the state board of registration in medicine to practice medicine and surgery in Michigan.

Grand View Hospital is a public hospital in Gogebic County. The board of trustees, its governing body, has adopted certain rules, among which is that attending physicians and surgeons must make complete records of their treatment of patients in the hospital. Another rule provides that the board reserves the right to remove any member of the medical staff or to deprive any physician or surgeon of hospital privileges whenever, in their sole judgment, the good of the hospital or of the patients therein demands it.

The board criticized Dr. Albert for not making the required records of details of treatment of cases. Dr. Albert was not permitted to practice in Grand View Hospital, and a patient was denied admission to the hospital unless she would agree to select a doctor other than Dr. Albert.

In subsequent litigation, the higher court held that the board could not exclude Dr. Albert from practicing and administering to patients in the hospital. The court said:

"The right given the hospital board to make rules, evidently in general, for administrative ('economic and equitable') purposes, is not a right to suspend or control treatment or operation on patients by duly licensed practitioner. The license of Dr. Albert granted him by the State board includes practice in public hospitals and shall be presumed to continue in such public hospitals until suspended or interrupted by some clearly and lawfully empowered authority."

CONTRIBUTORY NEGLIGENCY

According to a late higher court decision, a patient or guest injured in a hospital cannot recover damages for the injury, if the testimony shows that he was contributory negligent.

For example, in Grabinski v. St. Francis Hospital, 63 N. W. (2d) 693, it was shown that one afternoon a person named Grabinski entered the St. Francis Hospital by the ambulance entrance. Inside the door is a rectangular entranceway or lobby, from which people enter the elevator or use the stairs leading to the first floor. The floor is surfaced with burnt clay tile. Grabinski testified that it had been raining; that rain water, blown in whenever the door was opened, had accumulated on the tile floor to such an extent that it was slippery; that she slipped because of said condition and was injured by falling on the floor.

Grabinski sued the hospital for heavy damages on the grounds that the hospital was liable for her injuries because its officials failed (1) to provide adequate lighting in the entranceway; (2) to provide warning signs of the slippery condition of the tile floor; (3) to provide a nonskid tread on the tile floor, and (4) to mop up and remove the water that had accumulated on the slippery tile floor.

The higher court refused to hold the hospital liable, saying:

"The record discloses that the plaintiff (Grabinski) was familiar with the entranceway; that she fell after taking only a couple of steps inside the building; that she saw the water on the floor; that she could see where she was going; and a further statement that she could see. From the record, a finding by the jury that the areaway was insufficiently lighted would necessarily have been based upon conjecture and speculation.

Hence, Grabinski could not recover damages because she was contributory negligent.

STATUTE OF LIMITATIONS

All states have enacted laws which limit the time in which a patient may file a suit against a physician, surgeon, or hospital for malpractice. Last month a higher court held that such a statute is valid and enforceable, although the patient did not know the cause of his illness or injury until a few weeks before he filed the suit.

In Lindquist v. Mullen, 277 Pac. (2d) 724, a state law was litigated which provides that malpractice damage suits against physicians, surgeons, and hospitals are barred if the complaining patient fails to file a suit within three years from the date of the last treatment.

The testimony in this case showed that on February 1, 1946, a physician and surgeon performed operations upon a patient's gall bladder and hernia. He left a surgical sponge in the hernia incision, which prevented it from healing properly for over seven years. The patient was treated by the physician several times during the next three and one-half years. Finally the hernia incision broke open and drained continuously thereafter until March 31, 1953, at which time about two inches of gauze came out through the opening. Thereupon the surgeon again operated upon the patient and removed the sponge. The incision then healed properly.

The patient then sued the surgeon for damages. However, since the patient's suit was begun more than seven years after the operation, the higher court held that the suit was barred by the statute of limitations, although the sponge was not discovered until shortly before the suit was begun. The court said:

"We are concerned here with the interpretation of a statute. Appellant's (patient's) action was commenced on July 9, 1953. This was more than three years after the operations on February 1, 1946. Accordingly, appellant (patient) is barred from relying upon the negligent act of leaving the sponge in the hernia incision. It is also more than three years after appellant's last treatment by respondent (surgeon), on October 12, 1949, so that she cannot rely upon the alleged negligent diagnosis and treatment subsequent to the operation."

The Book Corner

Information for Physicians on the Salk Poliomyelitis Vaccine

Edited by Hart E. Van Riper, M.D., medical director of the National Foundation for Infantile Paralysis. Published by the NFIP, New York 5. The brochure assembles some of the important material on the Salk vaccine that has been published since its evaluation and answers clinical questions.

Information included concerns dosage and schedules of administration, who should get the vaccine first, vaccination during pregnancy, contraindications, minimal reactions, factors affecting immunity, problems of vaccine manufacture and storage, and research problems.

Also included are abstracts of technical reports published by the Public Health Service and the AMA, and highlights of the Francis report.

Manual for Nurses on Arthritis and Related Disorders

Published by the Arthritis and Rheumatism Foundation, 432 Fourth Ave., New York 16. Prepared by the foundation's medical and scientific committee. 59 pages. Available at 25 cents a copy to registered and practical nurses and nursing students. One of a series of 11 publications on the nature, care, and treatment of rheumatic diseases, this booklet gives information on the treatment of the disease. Specifically it includes general nursing measures, special problems of nutrition, family relationships, economic problems of arthritis victims, and prevention of deformities and rehabilitation.

Members of the committee recommend six objectives for nursing care for arthritis patients: arrest of the disease; control of pain; economic and emotional adjustment to prolonged illness; prevention of deformities; correction of existing deformities; and reasonable independence in everyday activities.

Also available is "Home Care in Rheumatoid Arthritis," a 23-page illustrated booklet dealing with physical therapy. Another pamphlet being offered is "What You Should Know About Arthritis," a seven-page leaflet describing rheumatoid arthritis and osteoarthritis. Both these pamphlets are available without charge.

Another publication of particular interest to nurses is "Self-Help Devices for the Arthritic," by Edward Lowman, M.D., a 123-page booklet with 175 illustrations, at $1. This publication describes and gives sources of equipment useful to patients handicapped by arthritis.

The Josiah Macy, Jr. Foundation 1930-1955

Published by the Josiah Macy, Jr. Foundation, 16 W. 46th St., New York 36. 174 pages. A review of the activities of the Macy Foundation for the last 25 years covers the results of the numerous research projects supported by the foundation.

During its first quarter century it has fostered certain developments: the wider recognition of the psychosomatic approach in medicine; increase of research in problems of aging, with the resulting change in public attitude toward the needs and rights of the older citizen, and the application of mental health principles to problems in medical and health care administration.

Specifically, the review covers the foundation's assistance in such areas as disease of the circulatory system, problems of nutrition, growth and development, personality development, endocrine physiology and pathology, and physiology of the bone.

Some discussion is devoted to the work done in medical education and medical problems in wartime.

The Hospital Medical Library

Published by the American College of Surgeons, 40 E. Erie St., Chicago. Prepared by Department of Literary Research. Hospitals that are planning to set up a medical library or reorganize an existing one will find this guide an invaluable aid.

Reprinted from the July-August 1955 *Bulletin of the American College of Surgeons*, the booklet contains detailed instructions on the organization and management of a hospital medical library. The author of this section, L. Margueriete Prime, librarian and director of the organization's department of literary research, covers the physical layout of the library, the duties of the librarian, and methods of financial support.

A second section of the booklet is devoted to a list of books and periodicals recommended for a hospital library. All publications are listed according to subject matter and title.

For Patient Protection

THE NEW POSEY "PATIENT AID"

The new Posey "Patient Aid" is another rehabilitation product which encourages self-exercise and is a positive aid to the geriatric. The patient can raise himself without calling for the nurse.
Catalog #B-654 (For open end beds) $5.95 each. Catalog #B-654A (For beds with solid foot ends) $5.95 each.

Posey Patient Support

Standard Model: PP-753, $5.85.
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Standard Model: P-4147, $5.75. Extra-heavy model: P-353. Riveted construction with keylock buckles, $18.75 each.
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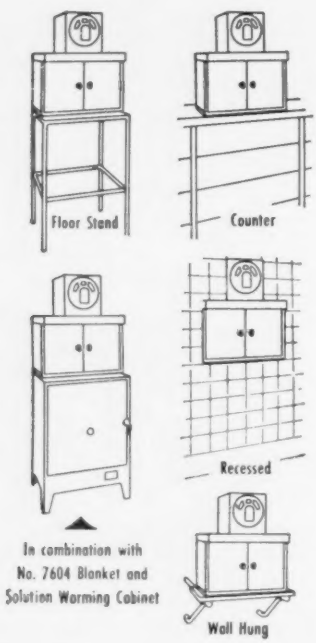

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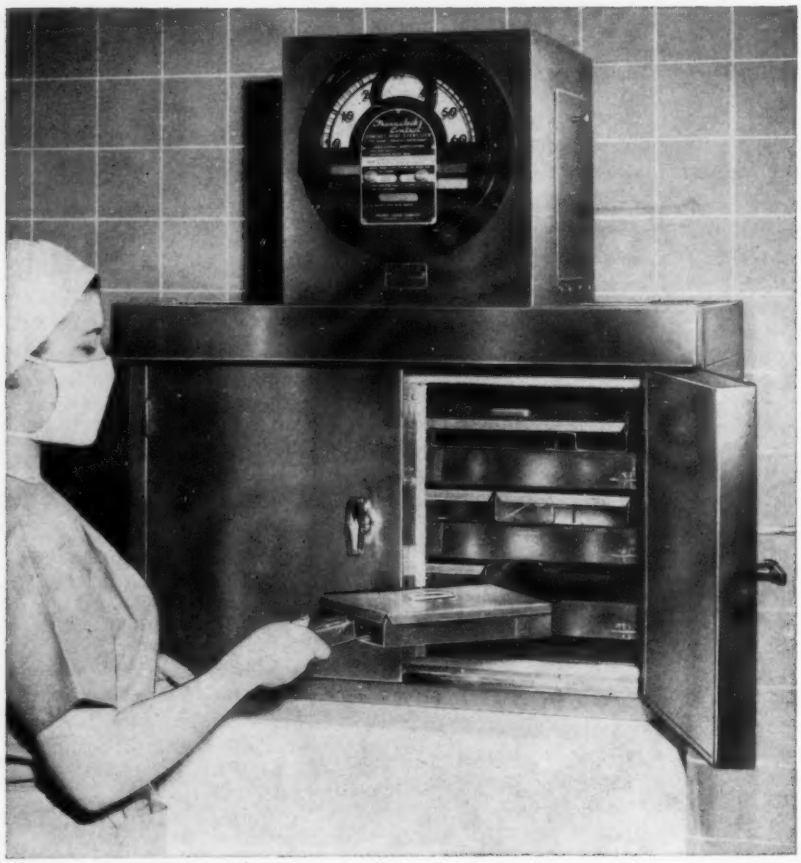

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Will automatically process cutting instruments for 9 surgical cases simultaneously . . . insures additional supply for emergency requirements.

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TRADE TOPICS...

Royal Metal Announces Two Staff Changes

Norman D. Roberts has been named assistant sales manager, hospital division, Royal Metal Manufacturing Co. He will be in the company's New York City office.

Mr. Roberts

Mr. Oest

A former hospital administrator, and a former employee of Bauer & Black, and the American Hospital Supply Corp., Mr. Roberts most recently was laboratory administrator of a U.S. Army chemical corps.

Gust A. Oest has joined Royal Metal's staff as hospital consultant to advise on product development and general hospital division operations. He was formerly general manager, Frank A. Hall & Sons Co.

New Company Manufactures Pharmacy Sectional Equipment

The new Grand Rapids (Mich.) Sectional Equipment Co., headed by Fred R. McWilliams, is manufacturing a new line of sectional equipment for professional and hospital pharmacies.

The company is situated in a $750,000 air-conditioned plant outfitted with the latest in woodworking and cabinet-making equipment.

There is a definite need, President McWilliams points out, for a new source to furnish sectional pharmacy equipment, because of its ever-increasing popularity. Mr. McWilliams was formerly head, pharmacy and hospital equipment division, Grand Rapids Store Equipment Co.

In most areas the equipment will be distributed through laboratory and hospital equipment manufacturers.

Hutchinson Appointed SM For Perkin-Elmer Division

Paul Hutchinson is the new sales manager, laboratory instruments division, The Perkin-Elmer Corp.

He was formerly sales manager, Baird Associates, Inc., Cambridge, Mass.

Walker Laboratories Recently Formed

J. T. Walker Laboratories was recently formed by James T. Walker, Columbus, O. The firm will feature institutional chemical specialties in the sanitary maintenance field.

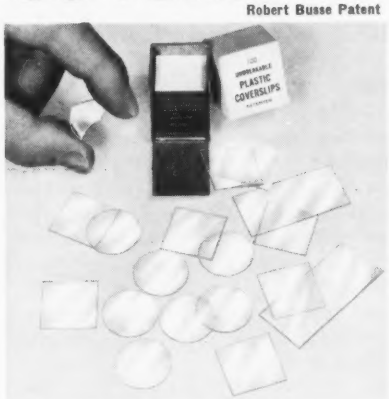
Mr. Walker was formerly associated with Vestal, Inc.

The home office of the new firm is located at 1269 Grandview Ave., Columbus, O.

James Walker, Jr., now stationed in Korea will join his father's organization when he leaves the service.

(Continued on next page)

DISPOSABLE
PLASTIC
MICROSCOPE
COVERSLIPS
Robert Busse Patent



UNBREAKABLE for LIE FLAT WON'T CUT FINGERS
UROLOGY PARASITOLOGY BLOOD SMEARS, ETC.

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	Price per M. 22MM or smaller (100 to box)	Larger sizes to 24x60 (1000 to box)
10M	$3.50	$5.00
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The Flexible, Sanitary, Disposable Drinking Tube

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Nurse Consultant Appointed By Hill-Rom Company

Alice L. Price, R.N., M.A., has been appointed nurse consultant, Hill-Rom Co. She will visit hospitals to observe routine nursing procedures in recovery rooms and labor rooms, and to confer with nurses regarding the use of Hill-Rom furniture.

Materials collected on hospital visits will be compiled into procedure manuals that will be made available to students and staff nurses.

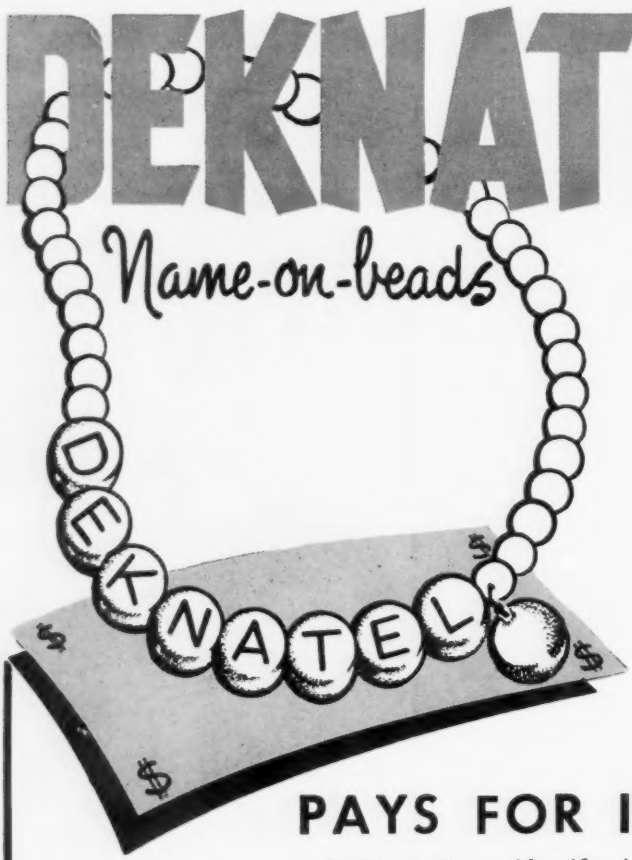
The first of the series of manuals, on the use of the safety slides for the prevention of bed fall accidents, is now being published, and will be ready for distribution soon.

Parke, Davis & Co. Announce Promotions

Elwood A. Sharp, M. D., blood authority, and director of clinical investigation for Parke, Davis & Co. since 1929, has been promoted to medical assistant to Harry J. Loynd, the firm's president.

Elmore C. Vonder Heide, M. D., has been appointed successor to Dr. Sharp. Dr. Vonder Heide has been associate director of the clinical investigation department, which medically evaluates new drugs in field tests all over the world.

Dr. Sharp gained international attention when he instituted the sulfone treatment of leprosy with Promin, a Parke-Davis product.



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Unlike ordinary identifications, Deknatel Name-On Beads are as attractive as a fine piece of jewelry. Parents are eager to buy them as a lasting "keepsake".

Even the most modest charge to parents yields a profit to you. If desired, Deknatel Name-On Beads may be used over and over again at a cost of a few pennies for cord and lead seal.

And, remember, Deknatel Name-On Beads are safer because they're *sealed-on* . . . permanently. There's no way to get them off except by cutting the strand when baby leaves the hospital.

For sample and details of 30 day trial offer, write —

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New Sales Manager For Auth Electric

Douglas J. Rourke has just been appointed sales manager, Auth Electric Co.

Mr. Rourke previously was sales manager, Standard Electric Time Co., Canada.

He will direct all sales efforts for Auth equipment.

The company, founded 1892 manufactures an extensive line of signaling and communications equipment for industry, schools, and hospitals.

American Hospital Supply Obtains Peruvian Contract

Contracts totaling $3,122,000 have recently been signed by American Hospital Supply Corp. to furnish and equip an 845-bed military hospital in Lima, Peru.

Contracts were negotiated with the Peruvian government through an American owned subsidiary—American Hospital Supply Export Corp. in Central and South America. It was the first large South American sale solicited by this subsidiary since its organization in January of this year. It also was the largest contract covering a single sale in American's 33-year history.

New Position for AMA Doctor

Paul L. Wermer, M.D., former secretary, AMA committee on research and committee on blood, is now vice-president and director of product development, Warner-Chilcott Laboratories, Morris Plains, N.J.

He will aid in the development of new products for prescription use by physicians.

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Certainly not. Want proof? Write for some BACTINE.* You'll get a bottle of clear, colorless, nonflammable liquid with a fresh, clean odor.

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You will find that BACTINE disinfects, cleanses, sanitizes effectively, yet leaves no "antiseptic" smell. When objectionable odors are present, it eliminates them. And it does all this without staining linens, drapes and gowns, or irritating skin.

BACTINE: Available in 1-gallon, 1-pint and 6-ounce bottles.

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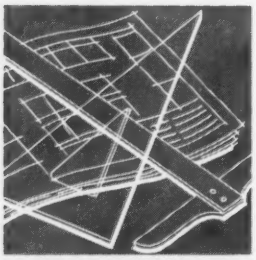

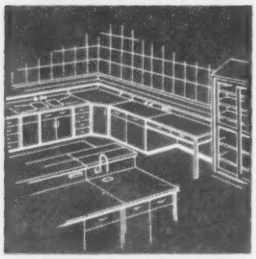

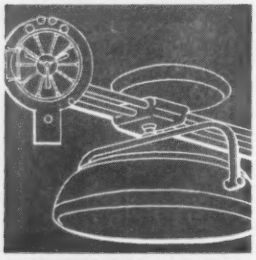

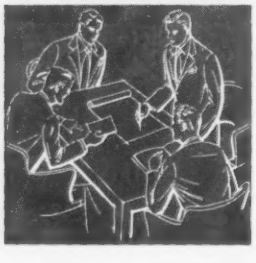

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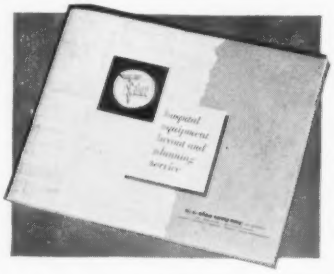
To the Architect or Engineer: We provide layout assistance and technical information concerning fixed equipment exclusively related to hospitals and laboratories; i.e., cabinets and casework, sterilizers, operating lights, etc.

To the Hospital Administrator, Board, Architect or Consultant: We will assist you in preparing cost estimates and selection of both fixed and non-fixed equipment—including preparation of suggested lists, suggested color schemes, and final selection of technical equipment.

To the Owner: We provide you with a comprehensive equipment procurement service, including our Customer's Order Control Record, which enables you to maintain a constant check on the status of your order. Shipments arrive at your hospital plainly marked with item numbers, hospital room number and department designation. Trained representatives make quarterly inspections of your equipment and make routine calls for sustained post-completion service.

A Plan: Your contractor requires a plan to construct the building. Hospitals have learned by bitter experience that a plan for the purchase of equipment is equally important. Pressed for time, and harried by endless details concerned with building construction and finance, many hospital planners have wisely turned to Aloe Purchase and Service Plan for experienced counsel and direct assistance in equipment planning and selection.

Brochure Free: We have prepared an illustrated brochure which sets forth in clear, simple details our Plan for equipment selection, planning and purchase. This brochure will be sent to you on request. Address your inquiry to Contract Division, A. S. Aloe Company, St. Louis 3, Missouri.



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TOPICS' SPECIAL REPORT ON:

AHA

Convention – Atlantic City

September 19-22, 1955

Many were the problems posed by this year's meeting; many were the words used in discussing their solution. Perhaps, like Demosthenes, practicing with pebbles in his mouth in front of the wild sea to cure his stuttering, many came away with the feeling that their problems are not insurmountable—in fact, are not much different from others' problems.

Advance winds of Ione (hurricane) or not, the atmosphere of Atlantic City blew a lot of cobwebs out, and everyone left with determination to make next year in his or her hospital better. The following pages may show why.

Attendance at the 57th annual convention of the American Hospital Association in Atlantic City did not set a record—the total of 10,287 was considerably below the 12,030 high in Philadelphia, three years ago. But those who came were enthusiastic about the program, particularly about the small round-table sessions inaugurated this year. Highlights of some of the many lectures and discussions are presented here. The report will be concluded next month.

House of Delegates Urges More Improvised Hospitals

Insurance Principles Approved

A resolution urging the Federal Civil Defense Administration to increase the number of improvised hospitals for the emergency care of casualties in the event of a natural disaster or enemy attack was passed by the AHA House of Delegates.

Robin Buerki, M.D., executive director, Henry Ford Hospital, Detroit, who presented the resolution, stressed the need for more hospitals and for training personnel to operate them.

Delegates asked the FCDA to: increase the number of improvised hospitals; place the units in warehouses in locations listed as critical; name custodians for the stored hospitals—preferably voluntary or government hospitals; define the lines of authority and responsibility; set up detailed plans for administering and staffing the improvised hospitals; train personnel to set up and operate the hospitals, and make available a number of the hospitals for demonstrations, training, and field tests.

The House approved guiding principles for developing health legislation for the needy, the aged, and servicemen's dependents—principles similar in many respects to those under which the Hospital Survey and Construction Act operates.

Under the suggested principles, federal funds would be matched by state funds, with the percentages of federal participation varying from one-third to three-fourths, depending on the wealth of the state. Federal funds would be granted to a single state agency, which might arrange for coverage for the needy through nonprofit voluntary health insurance or have such insurance organizations act as administrative agencies, to be reimbursed for cost or services rendered and for administration.

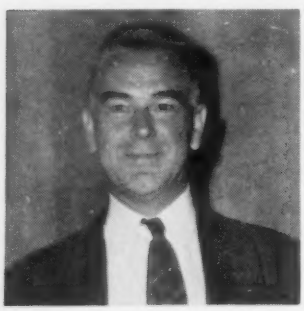
If neither of these arrangements is feasible, it is suggested that the state agency might arrange for direct payment to institutions and individuals rendering services.

To provide care for the aged, the principles suggest federal grants-in-aid to the states, to pay substantially the whole costs of excess utilization by the aged. Older persons would pay the same subscription charges as younger non-group subscribers, but would receive a contract not cancellable by the plan.

Care for servicemen's dependents would be provided through voluntary health insurance within the United States, its territories and possessions, under the approved principles. The federal government would assume responsibility for providing care in overseas areas.

During the final session, Albert W. Snoke, M.D., was unanimously voted president-elect of the association. Dr. Snoke, director, Grace-New Haven Community Hospital, New Haven, Conn., and professor of hospital administration at Yale University, will take office at the 1956 convention, to be held at the International Amphitheatre in Chicago.

Delegates re-elected John N. Hatfield, director, Passavant Hospital, Chicago, as association treasurer. New trustees are: Madison B. Brown, M.D., executive director, Hahnemann Medical College and Hospital, Philadelphia; J. M. McIntyre, administrator, Winnipeg (Man.) Municipal Hospital; and A. A. Aita, administrator, San Antonio Community Hospital, Upland, Calif.



Albert W. Snoke, M.D., director, Grace-New Haven Community Hospital, New Haven, Conn., is new president-elect.

All Sides Give Views on Hospital-Physician Relationships

The Hospital:

Court battles over the relationships between hospitals and ancillary specialties simply dim the repute of both sides. Widening medical skills have created new specialties, and the resulting realignment brought on confusion. Radiologists seek a monopoly in the hospital, even though competing surgeons all use its operating rooms. Pathologists want laboratories and lab personnel as their own concessions.

These things make patient care and running a hospital much tougher. If the trend goes on, hospitals fear they might turn into medical department-stores which offer necessary but uncoordinated services. Their boards do not want to practice medicine—that is, to diagnose or treat patients. However, they do not understand how the method by which a physician is paid can determine such a practice.

Nor do the boards understand how, to cite an inequity, a group practice clinic can pay salaries to doctors on its staff, excusing the system because the clinic is doctor-owned.—**E. Dwight Barnett, M.D.,** Professor of Administrative Medicine, School of Public Health, Columbia University, New York City.

* * *

In eight states, the attorneys general have ruled that hospitals are illegally practicing medicine if they pay salaries to physicians. The states are Iowa, California, Florida, Colorado, Missouri, North Carolina, Connecticut and Idaho. Only one—Connecticut—asked the hospitals themselves for their view.

All the rulings are so similar in wording that it can be assumed they were inspired by the specialty groups involved, prepared in advance and handed to the attorneys general.

If industrial concerns, health departments and health groups can employ salaried doctors, as they long have done, why is it suddenly wrong for hospitals to do so?—**John Q. Tilson, Jr.,** Wiggin and Dana, New Haven.

The Physician:

An ethical question, more than a social-economic problem, confronts hospital-physician relationships. No one suggests that the ancillary specialists are underpaid, nor that they do not practice good medicine. But the problem has been aggravated in large urban centers, where there is an oversupply of them.

(Continued on page 42)

Changing Communities Affect Hospital Planning

Like other urban institutions, the hospital is caught in the web of our aging cities. American population still is growing phenomenally; probably it will burgeon by another 25 million in the decade which began in 1950.

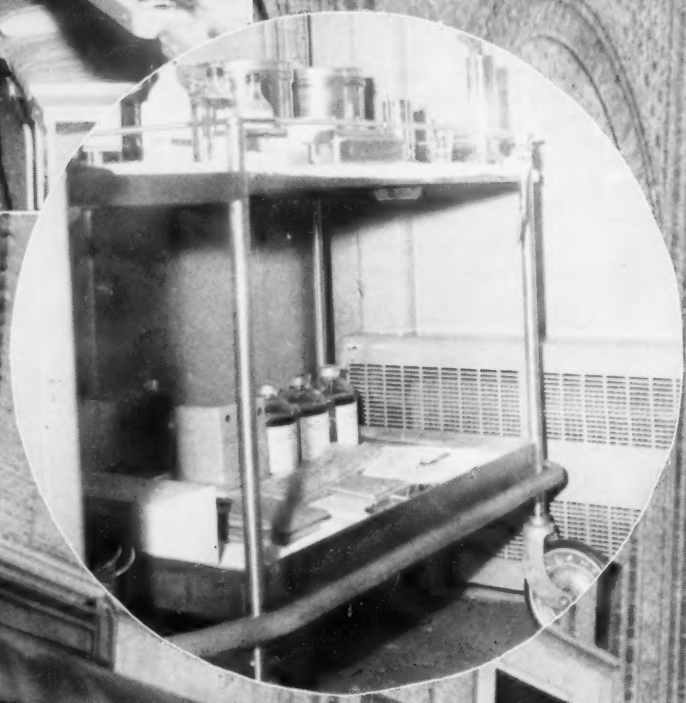
Too, it will keep shifting to the bigger cities and there to the outlying "rings" which sprawl far from the core of town. Because of this move to suburbia, many hospitals already find themselves in areas quite different, in land-use and population-type, than they were when the hospitals opened. Some try to follow old clienteles to the "rings." Others adjust with difficulty to their new central-city neighborhoods which, more and more, are made up of non-white and low-income in-migrant groups.

Increased hospital facilities must be provided, not just for more patients, but also for a population that, oddly, is both aging and getting younger. In geriatrics, the rising ratio of the aged requires increasing ingenuity. But in pediatrics, the unexpected postwar bumper crop of babies, still not over, promises problems for years to come.

Fortunately, the country's real income also is ever mounting, which means that more facilities can be afforded—**Philip M. Hauser**, Professor of Sociology and Director, Population Research and Training Center, University of Chicago.

Below: Sister M. Michael, R.N. (l), clinical instructor and Sister Patricia Catherine, R.N., Pediatric Supervisor, St. Mary's Hospital, Philadelphia.

New Army



UNITED STATES ARMY

ARMY MEDICAL SERVICE
AMBULANCE UNIT CAR
U.S.A. 89523

Hospital Train on Display

Upper left: Two ambulance cars of a new hospital train from the Walter Reed Army Medical Center were available for inspection by conventioners. Each car has a capacity for 27 patients, six attendants, a doctor and a nurse. The six berths for medical attendants can be converted for patient use. The lowest tier of the triple-tier beds may be converted to seats for ambulatory patients. Three berths near the nurse's station may be curtained off for the more seriously ill. Each berth is equipped with a tray for toilet articles and a movable tray holder for food trays and reading material.

Center left: A medicine cart and a sterilizer for needles are kept in a utility section of the nurse's station. Adjacent to the station, a stainless steel kitchen in each car is equipped with a refrigerator, deep-freeze unit, electric stove, and two 100-gallon hot water tanks. Each ambulance car is completely self-sufficient if detached, and includes a kitchen, nurse's station, ward area, small room for bed-pan sterilization, shower for patients, and roomettes for the doctor and nurse.

The train, set up on a railroad siding directly outside the convention hall, carries enough supplies for a three-day trip. In the event of a national disaster, the train would be used for wounded military personnel. In actual use it would include eight ward cars.

Below: Checking records in the nurse's station are Capt. Lois King, U.S. Army Nurse Corps, and Lt. Orlyn C. Oestereich, commanding officer of the unit. The nurse's station, which is next to the berth section, contains a desk, space for clinical records, a small sterilizer, phones for a patient call system and for outside calls to be made when the train is in a station, all medicines, and a combination-type safe for narcotics.

Pictures by HOSPITAL TOPICS

Some young doctors do try to make money too fast. Yet, generally the income of physicians has not increased disproportionately to the rest of the population.

Hospitals are unfairly criticized for the spiralling of costs. An automobile costs twice as much as it did 15 years ago. If private industry has not solved the problem of costs, hospitals should not be expected to solve it.—**Bernard A. Watson, M.D.,** President, Ontario County Medical Society, and Superintendent, Clifton Springs (N. Y.) Sanitarium.

The Public:

To many patients, hospitals are coldly unbusinesslike, with cash-register hearts. When discharged, they recall mainly the bad food and high bill. Later they may forget the menu, but never the money. Poor public relations, or none at all, often is the cause. Most people are never told why hospital costs soar.

Blue Cross can price itself out of business, and then citizens would shout for tax-backed hospitals. Some abuse can be blamed on doctors who, in public eye, should help police Blue Cross. Doctors owe hospitals a great responsibility, because physician-income has rocketed faster than fees mainly because the M.D. now can see more patients in hospitals.

Two groups suffer from hospital costs—the politically-potent elders and the fringe between charity cases and those who can afford Blue Cross.

Hospital salaries, notably in nursing, are a national disgrace. Biggest intra-institution problem, though, is lack of communication between levels and between doctors and administration. Too many trustees are appointed for *who*, rather than *what*, they are. Too many doctors, used to laying down the law to patients, overstep their knowledge in other fields. More liaison is needed.—**Donald J. Dunham,** Science Writer, Cleveland Press.

Blue Cross Calls for Rate Stabilization, Extension of Benefits

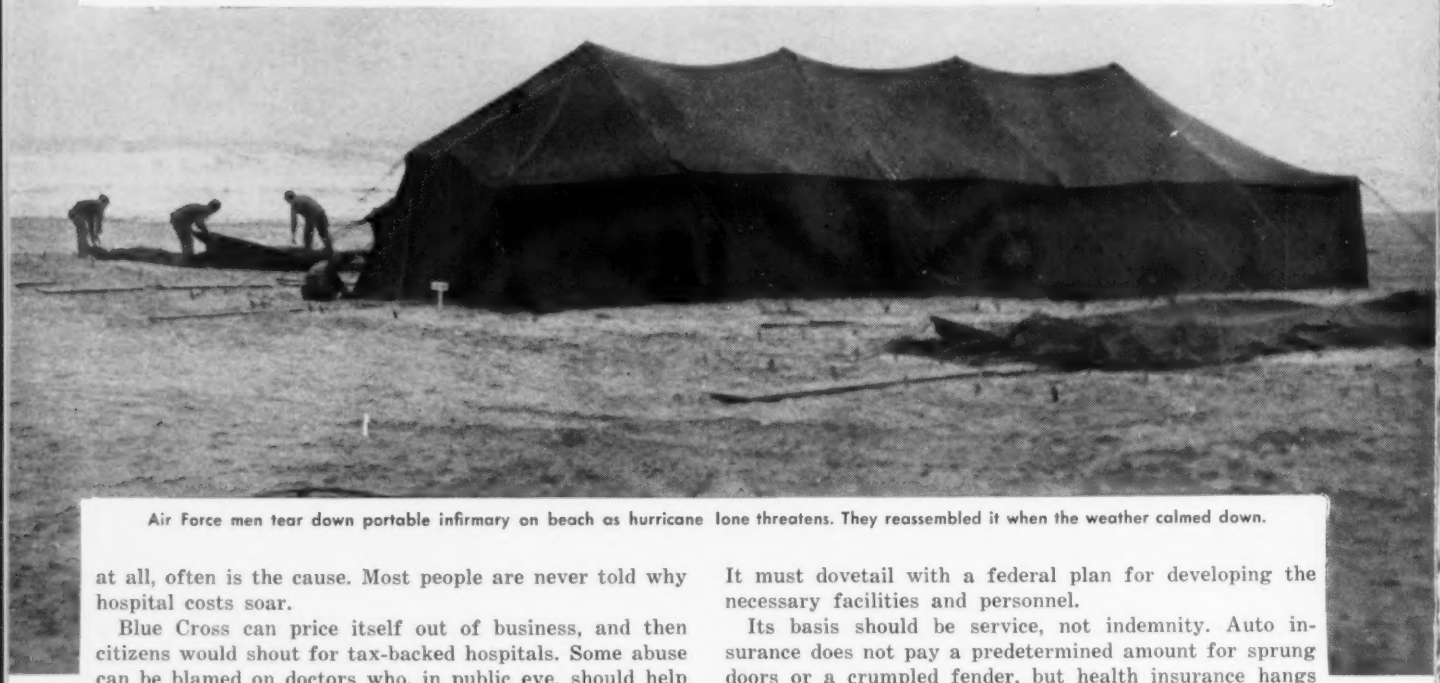
Public Must Be Aware of How Blue Cross Differs

Blue Cross would like to stabilize its subscriber rate, set up nationwide coverage for national accounts, develop sound individual enrollment, extend benefits to outpatient diagnostic services and long-term illness, and keep itself before the public as a vital part of the voluntary hospital picture. On the latter point, it is harmed by the admitting desks which classify Blue Cross along with any commercial insurer. Indirectly this pushes up Blue Cross rates, since Blue Cross still must cover the high-risk groups which commercial companies don't want.—**James E. Stuart,** Executive Director, Hospital Care Corp., Cincinnati.

Labor, Management Tell Their Insurance Desires

What Labor Wants

Needed is a universal, comprehensive health insurance program, one with consumer spokesmen in policy-making.



Air Force men tear down portable infirmary on beach as hurricane Ione threatens. They reassembled it when the weather calmed down.

It must dovetail with a federal plan for developing the necessary facilities and personnel.

Its basis should be service, not indemnity. Auto insurance does not pay a predetermined amount for sprung doors or a crumpled fender, but health insurance hangs price tags on arms, legs, and ailing tonsils. There could be keep-well incentives which encourage health education and early diagnosis and treatment, emphasizing prevention. Cart-before-the-horse prepayment is not health insurance at all, but rather insurance against the high cost of neglected health.

Provision must be made for the retired, the unemployed, and the chronically ill.—**Albert J. Hayes,** President, AFL International Association of Machinists, Washington, D.C.

What Management Wants:

In health insurance plans, there remain problems—the catastrophic illness, malingering, unnecessary service.

Some catastrophic health insurance already is written. Some one and a half million persons have it, but all these plans are in their experimental phases.

Co-insurance might be one way to combat malingering on the part of the overprescribing doctor, the overstaying patient and the overservicing hospital. But caution must be taken not to discourage early treatment of symptoms.

Most needed, however, is better education of the physician and, through him, of the patient. The doctor must understand and do his part.

Labor and management see eye-to-eye on most problems of prepaid hospitalization, which is the best answer to those who would have the government care for us through life.—**Allen D. Marshall,** Vice-President, General Dymanics Corp., New York City.

Joint Commission on Accreditation Defines Standards for Surgeons

Recommends Further Training For Foreign Graduates

A hospital, to maintain its high standards, must have qualified surgeons and medical men. What is a qualified surgeon? He is any man who in the eyes of his own medical staff is deemed qualified to perform the tasks delineated to him. You cannot limit yourself to saying that only certified board men may operate.—**Kenneth B. Babcock, M.D.,** Director, Joint Commission on Accreditation of Hospitals, Chicago.

Round-Table Discussion

Q. Should a surgeon be judged by the school of which he is a graduate?

A. Never. If he is licensed by the state and is a member of his local medical society, that should be enough to assure his qualification for a staff.

Q. What should we do about accepting graduates of foreign schools on our staffs?

A. I believe the hospital is justified in recommending postgraduate work before allowing these doctors to become staff members.

Q. It is sometimes difficult to achieve the Commission's minimum standard of an autopsy rate of 20 percent in a rural area. Will this keep us from being accredited?

A. This alone will not prevent accreditation. However, we have found that usually a very low autopsy rate goes along with poor records and poor medical staff organization. But our standards are flexible. It depends on the facilities available and the effort put forth.

Q. When a patient is re-admitted, how much time can elapse before routine laboratory work should be repeated? Can laboratory work done in the doctor's office immediately before admission be accepted at the hospital?

A. Routine laboratory work may be omitted if it is less than six months since the patient's previous hospitalization. Histories and physicals should be rewritten after 30 days. If re-admission takes place in less than 30 days, an interval note is sufficient. In special cases such as diabetics, blood sugar tests should certainly always be done. Regarding laboratory work done outside the hospital, no hospital should accept reports except from a qualified laboratory. Tests done in a doctor's office are not considered acceptable for hospital records.

Q. May an attending physician assist during surgery? Is an intern considered an acceptable assistant?

A. The attending physician is acceptable as an assistant unless he is incapable of taking over in an emergency. An intern is not acceptable as an assistant.

AEC Representative Defines Radioisotope Regulations

Hospital Required to Establish Committee for Safety and Control

The distribution and control of radioisotopes is handled at the source of supply through the inspection of laboratories and by licensing. To obtain a license to use radioisotopes, a doctor must fill out an application for the AEC, listing his training, experience, equipment, and precautions for safety. In hospitals, a radioisotope committee must be set up. It is the administrator's responsibility to be certain that the committee is composed of competent persons who are aware of the various regulations.—**George W. Morgan,** Chief, Radiological Safety Branch, Isotopes Division, Atomic Engery Commission, Oak Ridge, Tenn.

Round-Table Discussion

Q. Would a department doing radioactive iodine tracer studies replace the basal metabolism laboratory?

CLINTON C. POWELL, M.D., Senior Surgeon, National Cancer Institute, Public Health Service, Department of Health, Education, and Welfare, Bethesda, Md.: No. Each test shows only part of the clinical picture. One cannot be substituted for the other.

Q. What are the steps to follow in establishing a radioisotope laboratory in a hospital?

MR. MORGAN: You must have doctors in the hospital with training and clinical experience in handling radioisotopes. Organize a radioisotope committee and then make an application to the AEC in Oak Ridge, listing the members' background and the equipment which is on hand or which will be installed.

Q. What is the approximate cost of a reasonably adequate diagnostic set-up?

MR. MORGAN: A good average for a hospital laboratory would be about $3,000 to $5,000. It can go as high as $10,000.

Q. What kind of facilities are needed for storage?

DR. POWELL: The material should be isolated to protect personnel. A small section of the laboratory can be isolated with lead bricks. All radioactive chemicals should be properly labeled.

Q. What can we do about pathologists' objections?

DR. POWELL: The pathologist can call on the hospital's radiological safety officer for instruction. The National Bureau of Standards' Handbook 56, "Safe Handling of Cadavers," contains recommendations for pathologists.

Hospitals Urged to Provide More Preventive Medicine, Rehabilitation

Predicts Wider Scope Of Medical Education

The hospital must, to give definition to the "new medicine," now add prevention and rehabilitation to its services and move positively to serve its community.

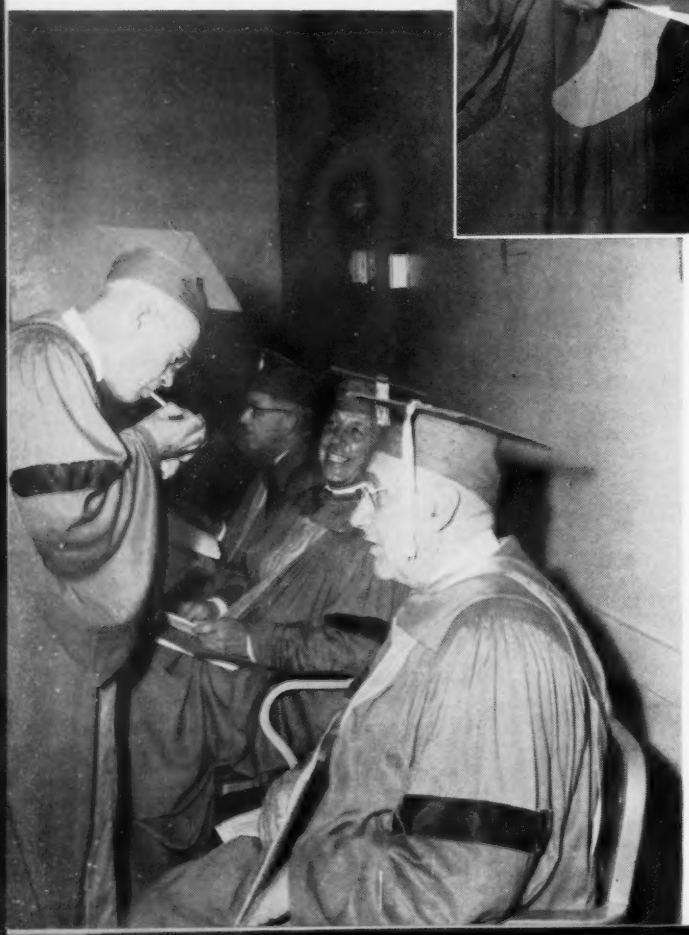
Facilities for medical education will be widened still further, with the non-university hospital playing a large role in training technicians and others.

In another quarter-century, prevention will be a major function of hospitals. The grouping of physicians around hospital buildings is a step in that direction—**Franklin D. Murphy, M.D.,** Chancellor, University of Kansas, Lawrence.

ACHA Holds 21st Convocation

Below: Several regents, relaxing just before convocation, were (l. to r.): A. J. Swanson, M.D., administrator, Toronto (Ont.) Western Hospital; Robert Hudgens, administrator, Lynchburg (Va.) General Hospital; ACHA president A. C. Kerlikowske, M.D., director, University of Michigan Hospitals, Ann Arbor, and A. C. McGugan, M.D., superintendent, University of Alberta Hospital, Edmonton.

C. M. Jorgensen, chairman of the board, Minneapolis Hospital Association, congratulates new fellow Ann Friedsburg, administrator, Midway Hospital, St. Paul, and Sister Mary Lenore, administrator, St. Gabriel's Hospital, Little Falls, Minn., who had just became a nominee.



Left: Robert M. Hutchins, president, The Fund for the Republic, delivered Arthur C. Bachmeyer Memorial Address.

Hospitals Must Attempt To Better Medicine

Hospitals and other corporations not-for-profit should try to improve the status quo, not merely preserve it. A hospital that does not attempt to better medicine is a failure. Yet universities and hospitals that do so must expect to criticize and be criticized.

Though American policy has been to encourage the private support of charity and science, critics of foundations now cry that tax-exempt money is "your" money and that the government should therefore oversee its spending. What a bona fide charitable or scientific institution does with its funds must not be decided by a legislative committee.

The winds are shifting. Those who believe foundations are accumulations of venture capital dedicated to pioneering now are doing fairly well. But great harm was done to those conceptions by McCarthyism, and the timidity it created lingers on.

In an age of suspicion, administrators should resist groups which seek conformity rather than discussion. Administrators must have a true vision of the end, and must pursue it. Otherwise, they may escape being "controversial," but the end is lost.—**Robert M. Hutchins,** President, The Fund for the Republic.

Opposite page, center: Third ACHA fellow in the Hahn family—Jack A. L. Hahn, administrator, Methodist Hospital, Indianapolis—is congratulated by his parents, Dr. and Mrs. Albert G. Hahn.

No signs of stage fright were evident just a few minutes before these men received honorary fellowships in the American College of Hospital Administrators. Recognized for their contributions to the health field were (standing, l. to r.): Emory W. Morris, president and general director, W. K. Kellogg Foundation, Battle Creek, Mich.; Robert Cutler, special assistant to the president of the United States and president and trustee, Peter Bent Brigham Hospital, Boston; Marshall Ivey Pickens, director, The Duke Endowment, Charlotte, N.C. Seated (l. to r.): Leland Ira Doan, president, The Dow Chemical Co., Midland, Mich., and Basil O'Connor, president, National Foundation for Infantile Paralysis, New York City.

Members of the College who were honored with fellowships made an impressive sight as they marched into the ballroom of the convention hall. During the ceremonies 76 members became fellows, 233 nominees became members, and 300 administrators were admitted to nomineeship.

Below: Dignitaries file off stage at conclusion of ceremonies.

The Boardwalk Says:

TOPICS reporters stopped strolling conventioners on the boardwalk to get their opinions on a few common problems. Here's what they had to say:

C. T. Wood

Arthur Bailey

Harlan Paine, Jr.

Q. What is the latest method you have used for cutting costs in your hospital?

C. T. Wood, assistant administrator, Roanoke (Va.) Memorial Hospital—We evaluate our personnel situation from time to time, because personnel costs represent the largest part of the budget. We are now inaugurating a system to enable us to keep closer tab on personnel and the relationship of the number of employees in various departments. We want them where they are needed.

Arthur Bailey, administrator, Orange Memorial Hospital, Orlando, Fla.—We are hiring better qualified personnel. If a department wants to hire someone, there must be a vacancy. The patient load has gone up, but we haven't had to add more personnel.

Overtime used to be a big problem. Now a department head has to request overtime in writing and explain why—and we have less overtime.

We recently increased the total number of days which employees can accumulate for sick leave from 21 to 60—at the rate of one day a month. Making the first day of sick leave on the employee's own time has saved us enough money to enable us to allow the accumulation of more time. Three older employees in one year found it necessary to use their 60-day allotment.

John C. Hess

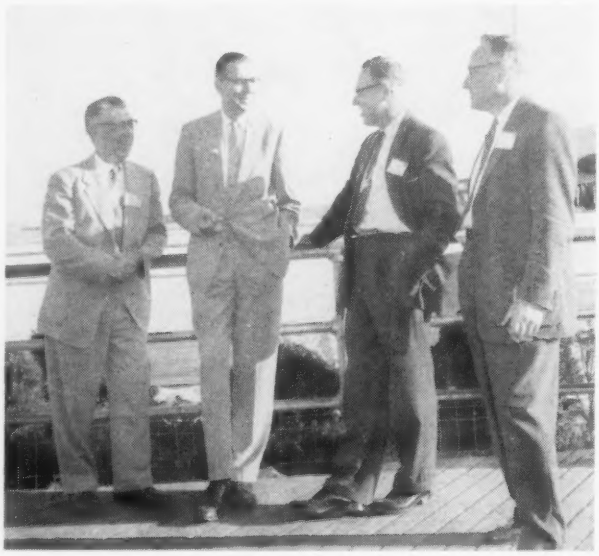
Q. What should the organization be between the trustee and the medical staff?

John C. Hess, administrator, Kings Daughters Hospital, Staunton, Va.—I'm leaning more and more toward ex officio representation of the board at medical staff meetings, and of the medical staff at board meetings. We have used this system a little, and it has helped bring better understanding. Board education is a continuous procedure, especially when your board changes every three years, as mine does.

Q. Do you use surgical technicians in your operating room? What is the ratio of nonprofessional to professional personnel?

Harlan Paine, Jr., administrator, Winchester (Mass.) Hospital—We began using technicians in our operating room about eight or nine months ago. Technically they work out very well, but sometimes there is a morale factor involved in their use—the doctors and nurses seem to resent them.

The ratio is probably not more than about one nonprofessional person to five professional persons.



Walking back to their hotels after the afternoon session at the convention hall were (l. to r.): R. I. Engbretson, trustee, Emanuel Hospital, Portland, Ore.; C. R. Youngquist, administrator, Sharon (Pa.) General Hospital; Paul R. Hanson, administrator, Emanuel Hospital, Portland, Ore., and F. A. Hanson, administrator, Iowa Lutheran Hospital, Des Moines.

Among the many conventioners who rode in the boardwalk's famous rolling chairs were (l. to r.): Vera B. Floyd, retired administrator, Babies' Hospital, Newark, N. J.; Mary O'Connell, administrative dietitian, Somerset Hospital, Somerville, N.J., and Florence P. Burns, retired administrator, Somerset Hospital.

32,000 More Beds Annually Needed in U. S., Cronin Says

Hill-Burton Responsible For 34% of Construction

The nation needs 32,000 more hospital beds annually merely because of the population increase. Approximately 50 percent of hospitals are physically obsolete, and an even greater percentage are functionally obsolete.

The Hill-Burton program is responsible for 34 percent of all hospital construction today. In the poorer states Hill-Burton construction constitutes about 80 percent of the total; in the wealthier states it represents about 30 percent. About $2.70 per person is spent for construction in the poorer states, and only about $1 in higher income states. The total dollar value of construction, however, is only about 50 percent in the poorer states as compared to the wealthier states, because the latter spend about $4 per capita.

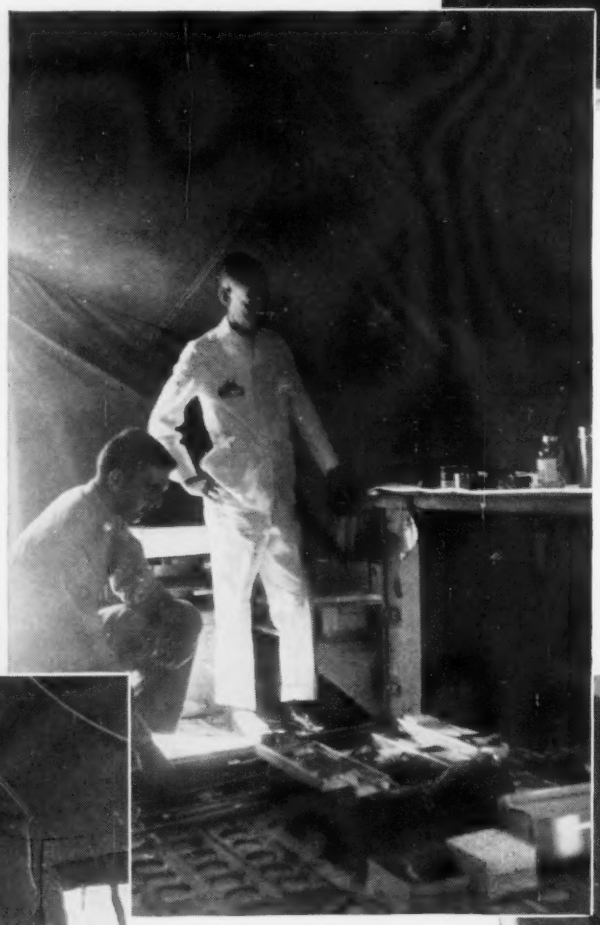
Up until July 1, 1955, Congress had appropriated approximately $700,000,000 and had been matched by $1.3 billion.

The need is great for facilities to care for the chronically ill. One of the biggest reasons for constructing such facilities is the expense factor involved in caring for such patients in the general hospital. Of the 25,000 existing nursing homes, only 7,000 are the kind we would like to go into if we were patients.—**John W. Cronin, M.D.**, Medical Director and Chief, Division of Hospital Facilities, U. S. Public Health Service, Washington, D. C., speaking before the American Association for Hospital Planning.

Flying Infirmary

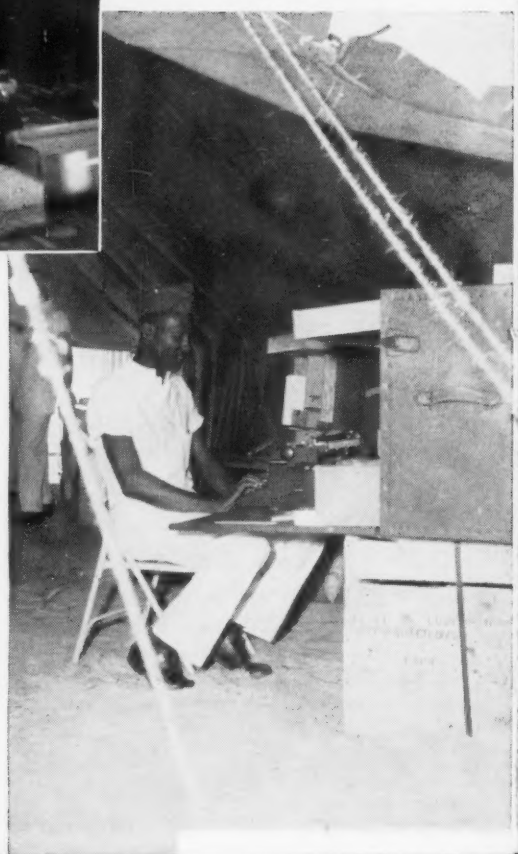
Right: Many administrators inspected the 36-bed air transportable infirmary set up on the beach directly across from the convention hall. Walter B. Dillon (r.), administrator, Annie M. Warner Hospital, Gettysburg, Pa., stops to talk with (l. to r.): Lt. John C. Villforth, project officer, and Capt. Charlie V. Miller, hospital registrar. The entire equipment of the Strategic Air Command's tactical hospital occupies 570 cubic feet, weighs 13,000 lbs., and is easily transported by air. It is packed in lightweight but sturdy cardboard boxes. Air Force personnel from Loring AFB, Limestone, Me. were able to set up the infirmary on the beach in Atlantic City in eight hours.

Right: In the outpatient department maintained for air force personnel not requiring hospitalization, equipment is displayed by A/2c Henry Trepicchio (l.), medical administrative apprentice, and Staff Sgt. J. F. Costello, pharmacist. The infirmary is divided into nine sections; outpatient, surgery, x-ray, laboratory pharmacy, dental, medical ward, surgical ward and food service.



Below: Probably the world's smallest hospital administration office is shown in full operation. Sgt. Roosevelt Sullen types records in the office, which comes out of a trunk.

Left: Staff Sgt. Manfred Miller, surgical technician, demonstrates the facilities in the surgical ward. Air-filled mattresses are on all beds.

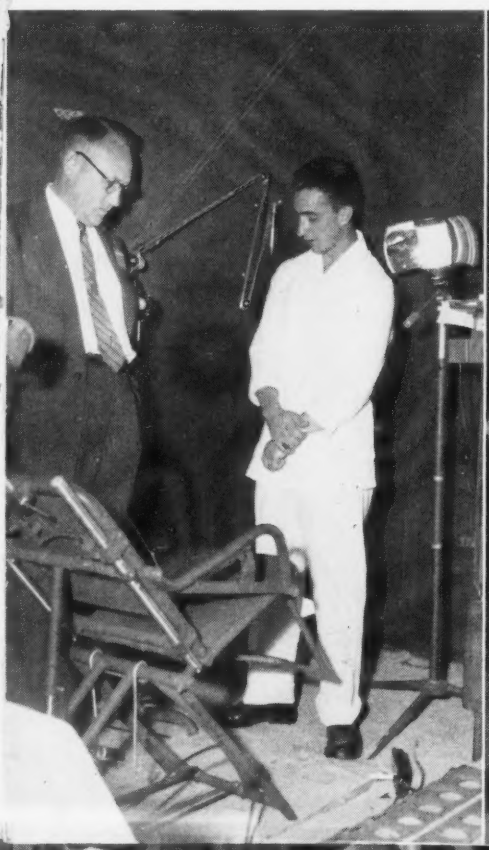


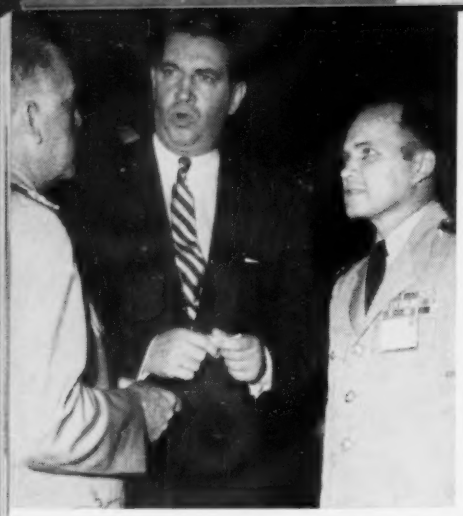
Below: Operation of the dental unit is explained to F. A. Hanson, administrator, Iowa Lutheran Hospital, Des Moines, by A/2c Gale Smyser, dental technician. The tactical support hospital is manned by a flight surgeon, a Medical Service Corps officer, a dentist, and 15 medical airmen.

Below center: A/2c Harry St. Johns, surgical technician (l.), and A/2c Bob McNutt, x-ray technician, demonstrate the portable x-ray unit which carries its own generator.

Above right: Completely equipped folding operating room table holds great interest for Alfred Johnson, (l.), president, Quakertown (Pa.) Hospital and Albert Taylor (r.), superintendent of the hospital. A cautery unit is being demonstrated by Staff Sgt. Dean Stelton, surgical technician.

Below: Sister Mary Paul, pharmacist, Fitzgerald Mercy Hospital, Darby, Pa., was especially interested in the handling of drugs and medications. A/1c G. A. Varney explains that enough supplies are kept on hand to operate the hospital for 90 days. Perishable drugs are flown in.





Above: At reception given by President Frank Bradley for incoming president Ray Brown were (l. to r.): Rear Adm. B. W. Hogan, Surgeon General of the Navy; John V. Connorton, executive director, Greater New York Hospital Association, and Lt. Thomas Hollis, executive assistant to the Surgeon General.

Above: Ray Brown was president of the association for exactly 30 minutes when this picture was snapped at reception following the banquet. Looking just as pleased and confident is Mrs. Brown.

Right: Congratulating Howard Rusk, M.D. (second from r.), on honorary membership are (l. to r.): Lilly Hoekstra, administrator, St. Louis Children's Hospital; Mrs. Ivan Lee Holt, Jr., St. Louis; and immediate past president Bradley.

Left: Among our good neighbors from the south were (l. to r.): R. Mejia-Ruiz, M.D., medical director, Font Martelo, Humacao, Puerto Rico; James S. Farrant, executive director, Alej. R. Soler Sanitarium, Rio Piedras, Puerto Rico; Jose Gonzalez, M.D., director, Latin-American Hospital Program of the AHA, Washington, D.C.; and Guillermo Almenara, M.D., president, Inter-American Hospital Association, Lima, Peru.

Above: At the Sisters' luncheon in the Traymore Hotel were (l. to r.): Msgr. R. A. Maher, president, Catholic Hospital Association; Ray Brown; Cardinal Francis Spellman, archbishop of New York, who spoke at the luncheon; Dr. Bradley, and Leo M. Lyons, director, St. Luke's Hospital, Chicago.

Left: At federal hospital luncheon were Col. Howell L. Curd, office of the surgeon general of the Air Force, and Jack Masur, M.D., assistant surgeon general, U. S. Public Health Service.

Below (l. to r.): Morton R. Chalef, senior agency consultant in hospital administration, New York City community mental health board; M. W. J. Abraham, executive director, Kent General Hospital, Dover, Del.; Alice Akeret, secretary, Cantonal Hospital, Zurich, Switzerland; and W. C. Anderson, executive director, Emily P. Bissell Sanitarium, Wilmington, Del.

Left: Administrators seem to have an eye for beauty as well as for what's new in the hospital field. It didn't take long for Charles E. Mattix (l.), administrator, Lancaster-Fairfield Hospital, Lancaster, O., and R. H. Athey, executive director, Newark (O.) Hospital, to discover Miss America.

Left: Gordon Gray and Ruth M. Sleeper stop after the AHA banquet, to compare their certificates of honorary membership.

CAMERA CLOSE-UPS

by TOPICS

Above: At President Brown's reception Joseph Norby shows several of his congratulatory telegrams to Ritz Heerman. Mr. Norby received the AHA award of merit. Mr. Heerman, general manager, Lutheran Hospital Society of Southern California, Los Angeles, retired from the board of trustees this year.

Above: Having an animated conversation at the edge of the dance floor at the President's reception were (l. to r.): Anthony J. J. Rourke, M.D., AHA past president, now a consultant in New Rochelle, N. Y.; Thomas P. Langdon, administrator, Hahnemann Hospital, San Francisco; Jane Herzog, executive assistant, Greater New York Hospital Association; and Mrs. Rourke.

Above: Photographed just before the dining room was opened for the Sisters' luncheon at the Traymore Hotel were (l. to r.): Sister Magdelen Rosaire, supervisor; Sister Miriam Kevin, central supply supervisor; and Sister Alice Marie, assistant director of nurses, all of St. Joseph's Hospital, Yonkers, N. Y.

Above: The four surviving members of the AHA's original committee on hospital service, who received special citations for their efforts in guiding the progress of hospital service prepayment plans, are (l. to r.): Rt. Rev. Msgr. Maurice F. Griffin, Cleveland; Basil C. MacLean, M.D., commissioner of hospitals, New York City; Robin C. Buerki, M.D., director, Henry Ford Hospital, Detroit, and C. Rufus Rorem, Ph.D., executive director, Hospital Council of Philadelphia.

Below: Louis Block (l.), Dr. P.H., U. S. Public Health Service, Washington, D.C.; John G. Steinle, Cresap, McCormick & Paget, management consultants, New York City; Mrs. Steinle, and Joseph Peters, administrator, Beekman-Downtown Hospital, New York City, at TOPICS booth.

COMING IN THE NEXT ISSUE

In the November issue HOSPITAL TOPICS will continue its report of the AHA convention, with digests of round tables on:

- Blue Cross Abuses
- Methods Improvement
- Impact of Independent Health Plans
- Dispensing Drugs at Night
- Practical Nursing
- Public Relations in Small Hospitals

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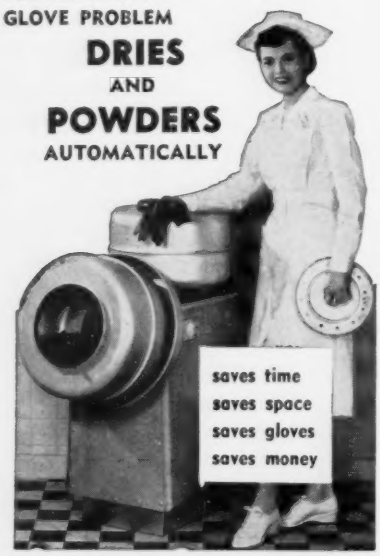

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Administrator Should Know Adoption Laws, Panel Says

About 150,000 children are born out of wedlock in the United States each year, of which some 45,000 are adopted by unrelated foster parents. The number of illegitimate births and adoptions grows each year, it was brought out in a panel discussion on hospital adoptions.

T. Stewart Hamilton, M.D., director, Hartford (Conn.) Hospital, was round-table chairman. Participants were Addie Thomas, consultant on practice, American Association of Medical Social Workers, Washington, D. C., and Margaret Thornhill, special consultant, Children's Bureau, Department of Health, Education, and Welfare, Washington, D. C.

Suggestions and conclusions of the panel were:

1. Hospitals can help medical staff members understand that independent adoptions—not through a regular agency—are not good adoptions.

2. The administrator should know the laws on adoptions, familiarize himself with his community resources on adoptions, stress the importance of good medical care for the unwed mother, and, most important, know what goes on in his own hospital. Cooperative hospital authorities could help cut down on the black market in babies.

3. Several administrators suggested that they should avoid any legal difficulties by having nothing to do with adoptions at all.

4. A growing practice is one in which an unwed mother deceives the hospital by registering under the name of a married woman who intends to adopt the baby. Falsifying a birth certificate is illegal and deprives the child of any legal rights later in life.

Panel Discusses Wage Scale and Limits

Equitable pay is a salary which is acceptable to the employee and to management, and which can be explained in terms of the job description.

Other conclusions reached by a panel discussing employee wage scales were:

1. Hospitals are too much on the defensive about low salaries. They should emphasize fringe benefits.

2. A job should be evaluated on the basis of such factors as whether or not the employee meets the public, the physical hazards involved, and the education required. The job should then be evaluated and rated, as much as possible, against the community scale. The factors involved in a particular position should be predetermined and the proper value then placed on it.

3. A person must be told at the start of employment what the pay scale limit is. However, after the top of the scale has been reached, merit should be considered. There should be a flexible limit to allow for special situations.

4. Hospitals owe it to their communities and employees to establish an equitable pay scale.

Members of the panel were Ellen Adams, personnel director, New England Deaconess Hospital, Boston; George W. Graham, M.D., director, Ellis Hospital, Schenectady, N.Y., and Hilda H. Kroeger, M.D., administrator, Elizabeth Steel Magee Hospital, Pittsburgh, Pa. Chairman was Carl C. Lamley, executive director, Stormont-Vail Hospital, Topeka, Kans.

University HA Programs Discuss Research Needs

Members of the Association of University Programs in Hospital Administration discussed how the schools might participate in the $1,200,000 research program recently authorized for the Public Health Service. The association, at a breakfast meeting, heard John W. Cronin, M.D., and Louis Block, Dr. P.H., U. S. Public Health Service, discuss the research expenditures recently authorized under the Hospital Survey and Construction Act.

A resolution was passed to appoint a committee to look into the program and determine to what extent the university groups can contribute.

Telephone Called Best Collection Method

The best collection technic utilizes the telephone, according to Glenn B. Sanberg, executive secretary, American Collectors Association, chairman of a clinic on collection technics at the meeting.

Every hospital should assign a person who does nothing but follow up on the people who haven't paid, he pointed out. Hospitals have an obligation to other industries and businesses to see that the flow of credit is not stymied or blocked.

When a debtor fails to meet a payment on his contract, he should not be allowed to make a token payment, like $2 or $3, Mr. Sanberg declared. Instead, his contract should be renegotiated.

Best time to find a debtor by telephone at home, Mr. Sanberg suggested, is between the hours of 6 and 7 in the morning.

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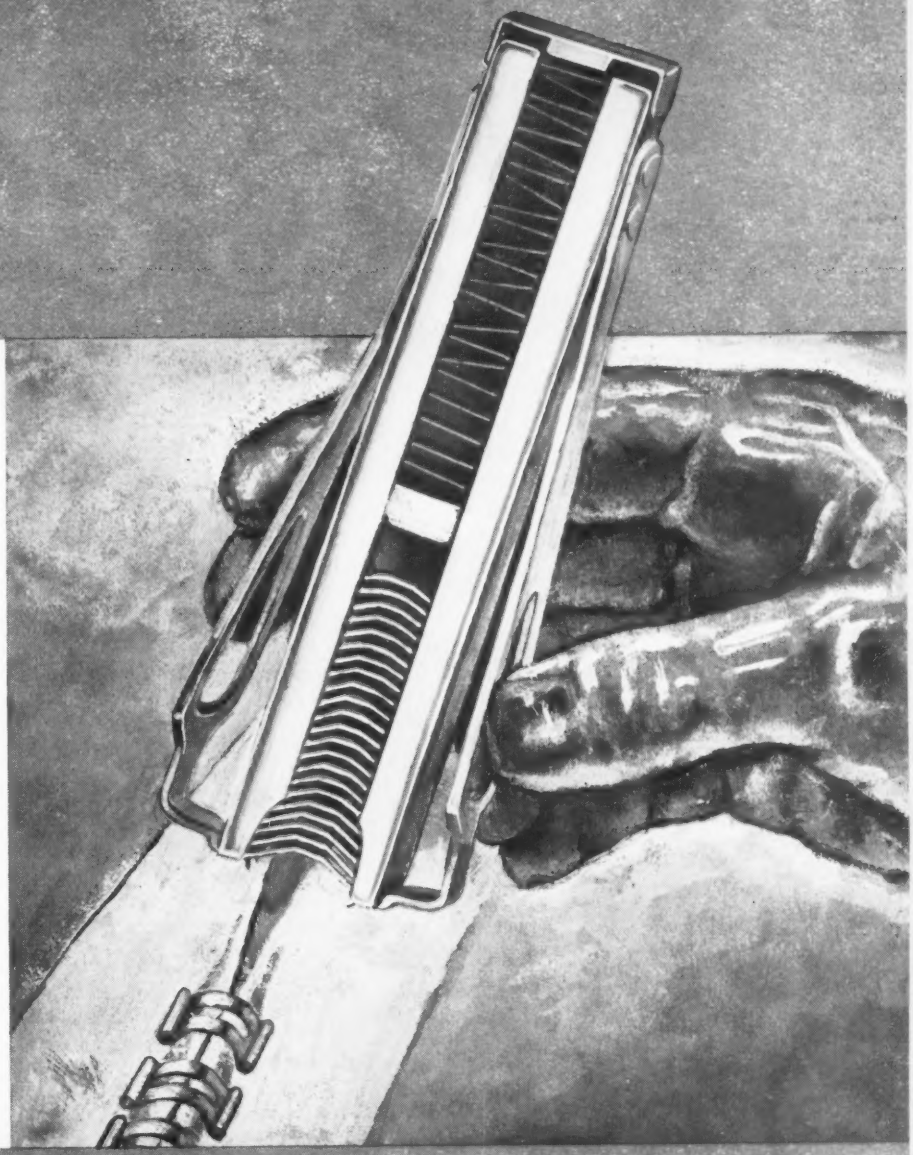

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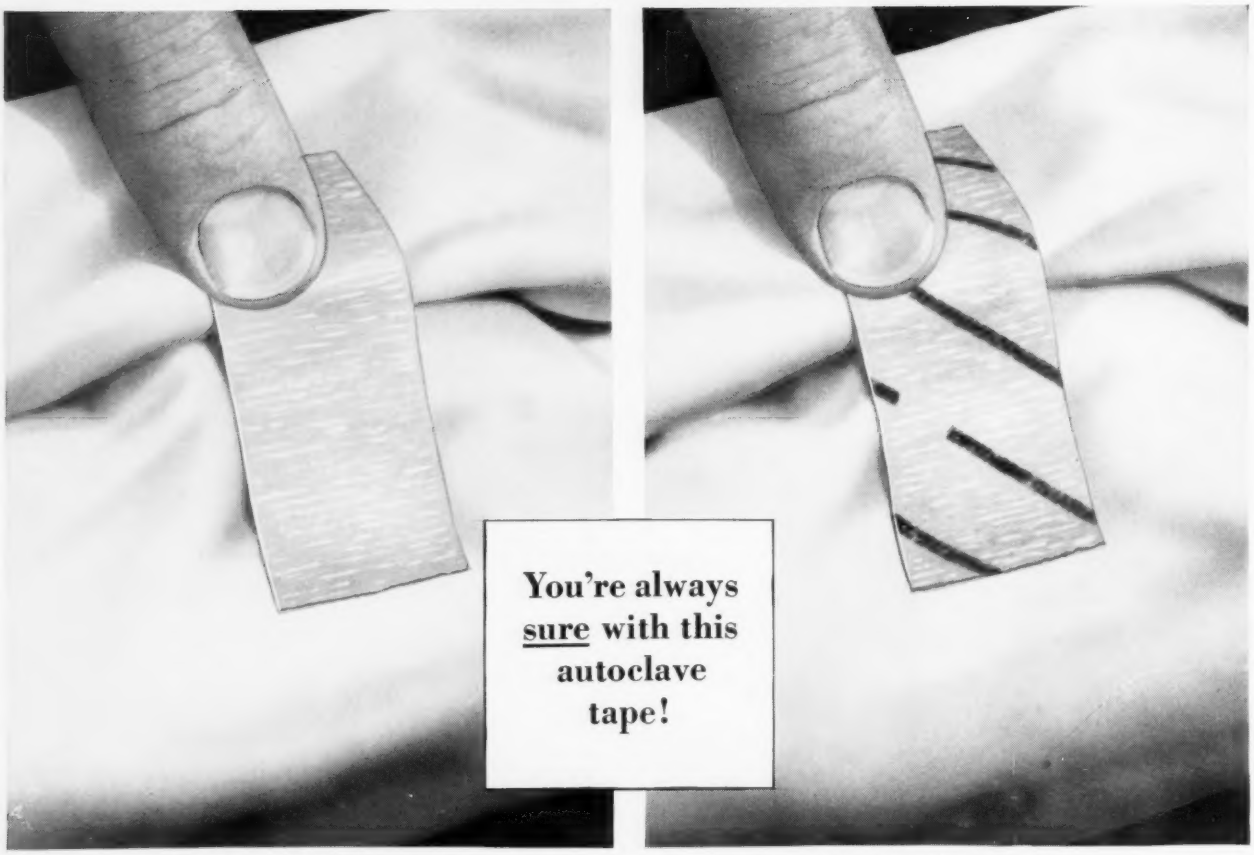

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1008. Miniature syringes
1008a. Starch sponge
1009. Children's traction frame
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1011. Terry table
1012. Nurse's uniform
1013. Hair removing cream
1014. Repels dust
1015. Spray-on bandage
1016. Electronic control
1017. Lab washer
1018. Arm sling suspension
1019. Intravenous arm splint
1020. Vaporizer
1021. Rack and pinion resectoscope
1030. Swimming manual
1031. Cranberry recipes
1032. Masonry brochure
1033. Billing folder
1034. Porcelain sink bulletin
1035. Diaflo unit bulletin
1036. Glassware cleaning
1037. Oxygen film
1038. IBM film
1039. Infant nutrition film
1040. Oil-treating of linens
1041. Color slide sequence
1042. Anesthesia periodicals
1043. Apple desserts
1044. Commercial cooking equipment
1045. Radiation measuring equipment
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1048. Institutional mix
1049. Portion meat film
100. Self-closing bag
101. Matched food service
102. Operating light and camera
103. Monkey bar
104. Renografin for urography
105. Two-position chair
106. Precision incubator
107. Hospital ware
108. Disposable surgeon's cap
109. Long tip pipette
110. Tubegauz bandage
111. Dishwashing compound
112. Muscular skeleton
113. Room deodorant
114. Atraloc
115. Autoclave
116. Washing bucket
117. Jaw needle holder
118. Disposable bassinet
119. Marking pen
120. Microfilm reader
121. Coffee urn
122. Cylindrical sterile solution flask
123. Chloromycetic intramuscular
124. Snap-out screen
125. Vinyl sheeting
126. Autoclave wrap
127. Surgical instrument table
128. In-bed scale
129. Knuckle band
130. Aluminum mixer
131. Narcotic and barbiturate cabinet
132. Color-coded compound
133. Electronic air cleaner
134. Cardiac pacemaker

USE THIS CARD

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BUSINESS REPLY CARD
First Class Permit No. 34341, Sec. 34.9, P. L. & R., Chicago, Illinois

HOSPITAL TOPICS
30 West Washington Street
Chicago 2, Ill.

Send more information on items circled. OCTOBER, 1955

1000.	1008.	1015.	1031.	1039.	1048.	106.	114.	122.	130.
1001.	1008a.	1016.	1032.	1040.	1049.	107.	115.	123.	131.
1002.	1009.	1017.	1033.	1041.	100.	108.	116.	124.	132.
1003.	1010.	1018.	1034.	1042.	101.	109.	117.	125.	133.
1004.	1011.	1019.	1035.	1043.	102.	110.	118.	126.	134.
1005.	1012.	1020.	1036.	1044.	103.	111.	119.	127.	
1006.	1013.	1021.	1037.	1045.	104.	112.	120.	128.	
1007.	1014.	1030.	1038.	1047.	105.	113.	121.	129.	

Other information .....

Name .....Position .....
(Please Print)

Hospital .....

Address .....

City .....Zone.....State .....

BUYER'S GUIDE Information Service

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1000. Infant hand resuscitator
1001. Fracture padding
1002. Compact spirometer
1003. Dispensing box
1004. Disposable drinking straw
1005. Automatic coffee maker
1006. Desi-discs
1007. Surgical cosmetic soap
1008. Miniature syringes
1008a. Starch sponge
1009. Children's traction frame
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specific

NOT "SHOTGUN" THERAPY

in diaper dermatoses

Diaparene® CHLORIDE

FITS YOUR TREATMENT TO THE CAUSE

FECAL IRRITATION

Diaparene PERI-ANAL

FOR: Peri-Anal Dermatitis

CRITERIA: Inflammation centered around the anus from 3 to 4 cms. in diameter and frequent stools.

CAUSE: Transitional stools in the newborn, diarrhea or following oral antibiotics.[1]

MODE OF ACTION: Provides a skin coating with a competitive protein substrate, plus anti-enzymatic and antibacterial action in a water-repellent, cod-liver-oil base.[2,3]

URINE IRRITATION

Diaparene OINTMENT

FOR: Ammonia Dermatitis

CRITERIA: Presence of ammonia odor and buttock-inflammation in apposition to wet diaper.

CAUSE: Free ammonia liberated by urea-splitting organisms.

MODE OF ACTION: Prevents ammonia formation in voided urine with an antibacterial in a water-miscible base[4,5] . . . adjuvant therapy to routine Diaparene Rinse impregnation of diapers.[7,6]

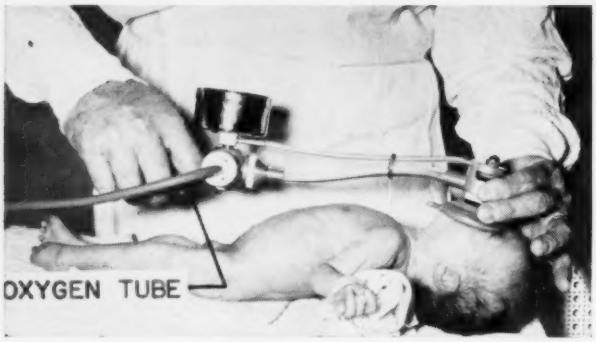
1. Manheim, S. D., et al: "Further Observations on Anorectal Complications Following Aureomycin, Terramycin and Chloromycetin Therapy." N. Y. State Jrnl. Med., 54:37-1, Jan., 1954.
2. Curry, J. C. and Barber, F. W.: Bacteriological Proceedings, 1951, of The Society of Am. Bact., page 23.
3. Grossman, L., St. Francis Hospital, Miami Beach, Fla., to be published.
4. Niedelman, M. L., et al: Jrnl. Ped., 37:762, Nov., 1950.
5. Bleier, A. H., et al: Arch. Ped., 69:445, Nov., 1952.
6. Benson, R. A., et al: Jrnl. Ped., 31:369, Oct., 1947.
7. Ibid: Jrnl. Ped., 34:49, Jan., 1949.

PHARMACEUTICAL DIVISION, HOMEMAKERS' PRODUCTS CORPORATION, NEW YORK 10, N. Y. TORONTO 10, CANADA

BUYER'S GUIDE

For further information on any of the products, please check the Buyer's Guide number on the reply card facing page 53.

1000. Infant hand resuscitator



Goddard-Bennett-Lovelace resuscitator is a hand-operated unit requiring no electricity or other power. Compact size makes model available for immediate use when needed—entirely under control of administering physician. Unit is assembled and ready for instant emergency use as packed in its carrying case. Four sizes of masks and four tracheal catheter adapters included with each unit. Oxygen concentration chart conveniently located on cover of case. Unit affords means of providing accurately-controlled intermittent positive pressure breathing to expand safely the atelectatic lung of newborn. V. Ray Bennett & Assoc.

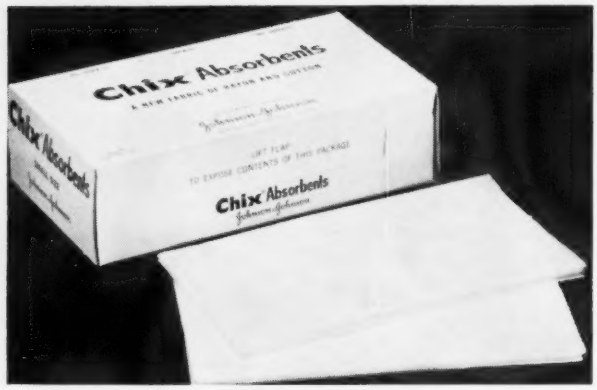
1001. Plastic padding for fracture

Durocel, porous plastic product resembling foam rubber, can be used for casts. Said to be non-toxic, non-allergic material that can be washed, boiled, and autoclaved. Product comes in roll form; elasticity permits good wrapping job around knuckles, ankles, knees, and ribs. Material supplied in rolls of 2", 3", 4", 6" and 12" widths, each of 72" length. Zimmer Manufacturing Co.

1002. Compact spirometer

Easy to carry in pocket or bag—less than six ounces in weight. It measures vital capacity of lungs in cubic centimeters. Tables of standards are available to translate measurement to percent of normal or average capacity. Information obtained aids in diagnosis, treatment, and prognosis of cardiac disease, pleurisy, pneumonia, and pulmonary tuberculosis. Propper Manufacturing Co.

1003. Absorbents dispensing box

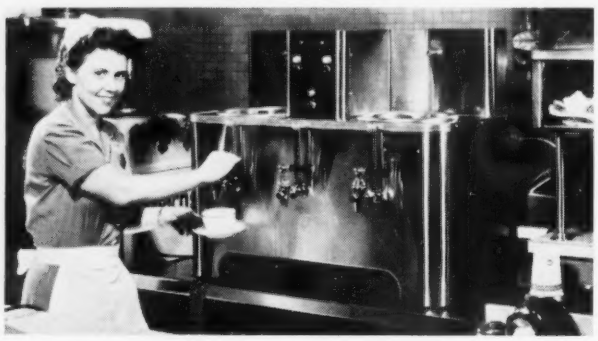


Box is designed to facilitate handling and permit easy removal of one Chix unit at a time. Each box contains 40 units, and there are 48 boxes in the shipping case. Chix absorbents, non-woven fabric with great tensile strength, are reported to be super-soft and strong. Used as wipes in surgical recovery room and as general clean-up cloths. Johnson & Johnson.

1004. Disposable drinking straw

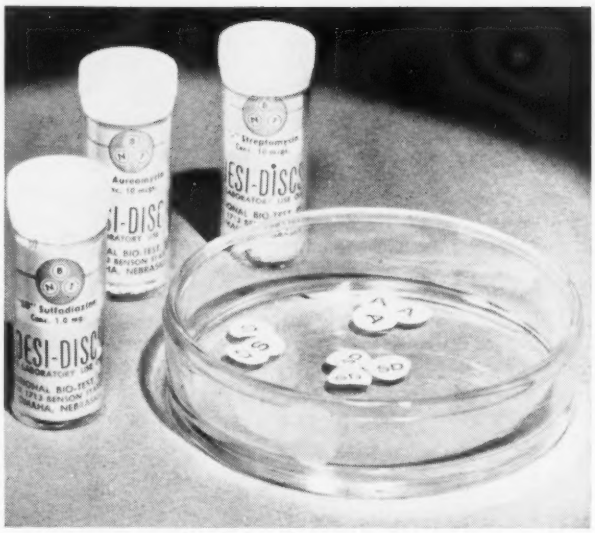
Flex-Straw, paper straw made to bend to any angle without stopping the flow of liquid, can be used in hot liquids without falling apart. Drinking angle is not rigid as with breakable tubes; there is no danger of injury due to breakage. Flex-Straw eliminates need for collecting, sterilizing, and re-issuing traditional drinking tubes, according to the manufacturer. Flex-Straw Co.

1005. Automatic coffee maker



Automatic, electronically controlled push-button coffee maker designed to reduce brewing costs and save labor time. After push button is pressed, machine requires no further attendance by operator. Correct volume of water at the proper temperature flows into the extractor and seeps through coffee grounds. Best Products Co.

1006. Desi-discs



Desi-discs, paper discs for culture testing, are impregnated with antibiotic and then dried. Discs are marked to differentiate antibiotic and to indicate their relative concentrations. Desi-disc is placed on Petri dish seeded with test organisms, and diameters of zones of inhibition of bacterial growth are then noted. Product is said to be time-saving because only two discs of different strengths are needed. Packaged with a desiccant and then properly stored, they retain potency over 12 months. Scientific Products Division, American Hospital Supply Corp.

1007. Surgical cosmetic soap

Germidical surgical soap reduces scrubbing time to three to six minutes; has emollient effect on the skin. Soap contains two percent hexachlorophene in a soap base containing milk solids and lanolin for extra mildness. Clean, pleasant odor; hospital-green color. Available in both wrapped and unwrapped cakes. American Safety Razor Corp.

1008. Miniature hypodermic syringes

Novel and attractive gift item for doctors and nurses are Hypo-Links, miniature hypodermic syringes formed into cuff links. Scaled to exact size and gold-plated. Each pair set in a gift box. Emergency Kit Corp.

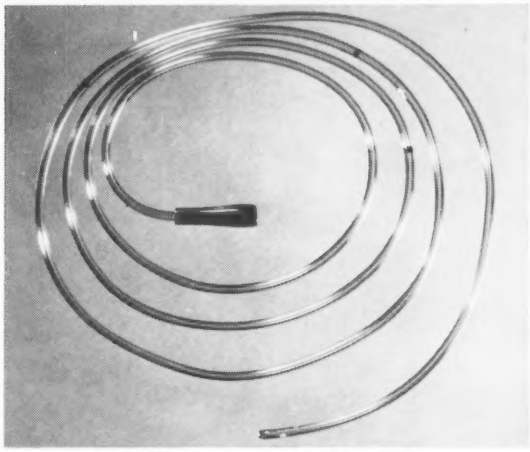
1008a. Starch sponge

Solusponge is a new, completely absorbable hemostatic sponge of pure starch. Can be used in all fields of medicine and surgery where bleeding is a problem. Said to be non-irritating and non-toxic; can be sterilized by autoclaving. Available in strips, cones, and packs. Panray Corp.

1009. Children's traction frame

Dual-purpose traction frame, said to reduce circulatory complications in children treated for fracture of femur in Bryant's traction, has been developed. Frame can be used for suspension traction in treating children 2 to 4 years old, or for extension traction for older children. Easy conversion from suspension to extension traction. Orthopedic Frame Co.

1010. Tube for feeding premature babies



Small diameter plastic tube is 36" long—21" longer than standard feeding tube. Extra length permits connector end to extend convenient distance outside incubator, which remains closed while nutrients are being administered. Smooth, pliable, small-bore plastic tubing is non-irritating and not affected by body chemicals. Can be left in place for prolonged periods without necessity of removal for cleaning. Pharmaseal Labs.

1011. Terry table

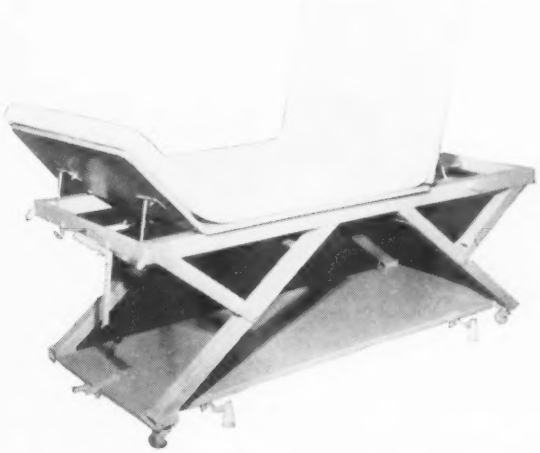


Table adjusts to working height of physical therapists. Ends raise to a 90° head position and a 45° foot position. Foot end offers sitting position for quad and knee flexion exercises. Has 2" casters for mobility and floor brakes for stability. The frame is of 2" narrow steel. Top and shelf are of plywood with a foam rubber padding. Physical Therapy Equipment, Inc.

BUYER'S GUIDE

Continued

1012. A-line look uniform

A two-piece tunic design in super poplin for a high-style professional look. Uniform bodice tucked and pleated back and front. Comes in sizes 10-18. A similar style in nylon taffeta at a slightly higher price. White Swan Uniforms, Inc., also has a smart-looking maternity uniform for fall.

1013. Hair-removing cream

Exare is designed for preoperative removal of hair from body and limbs—removes hair in 10 minutes, eliminating use of razor in prepping patients. Non-toxic; won't cause skin irritation. Edison Chemical Co.

1014. Repels dust off surfaces

Dust-Off keeps dust off surfaces, the manufacturer claims. Dust-Off is squirted on the cloth before dusting. It is easy to use over wax. Can be used in bathroom because it deodorizes and sanitizes. Good for venetian blinds, plastics, and furniture. Ade-O-Matic Co.

1015. Spray-on bandage

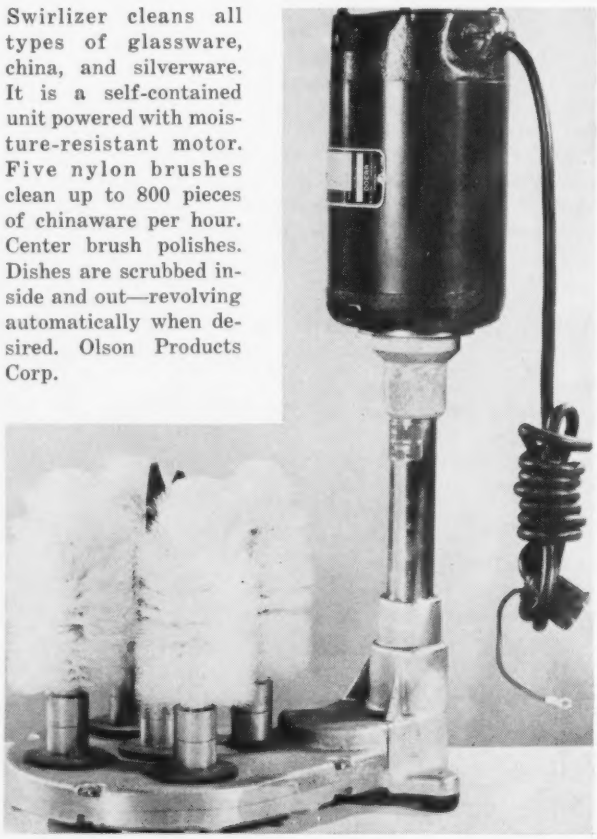
Aeroplast dries in 30 seconds into a transparent film which adheres to uninjured skin around the wound, but won't stick to the raw wound itself. It forms a plastic layer over the wound which prevents the entrance of harmful, infecting bacteria, while still allowing escape of body perspiration. Plastic dressing can be peeled off just as simply as dead, sunburned skin. Dressing is said to be tough, sterile, transparent, easily applied, flexible. Aeroplast Co.

1016. Electronic control for arthritis

Heat is generated in portable, cabinet-like control panel and fed into a lightweight hood-like arrangement that covers any part of the body. Control system utilizes electronic brain to regulate temperatures within one-quarter of a degree. Unit is shock-proof and burn-proof. Hill Labs.

1017. Washer for glass and china

Swirlizer cleans all types of glassware, china, and silverware. It is a self-contained unit powered with moisture-resistant motor. Five nylon brushes clean up to 800 pieces of chinaware per hour. Center brush polishes. Dishes are scrubbed inside and out—revolving automatically when desired. Olson Products Corp.



1018. Arm sling suspension

Unit consists of a pair of adjustable horizontal arms attached to vertical standards mounted on mobile, heavy metal base. Arms adjustable from 56 to 63" above floor —in 1" steps. Unit requires maximum floor space of 25 sq. in., and its total weight is approximately 50 lbs. Unit is so constructed that it can be used by patient at a standing table, or in a wheel or straight chair. Ability to elevate sling bar to three positions is added feature for patients who must maintain inclined position. Franklin Hospital Equipment Co.

1019. Intravenous arm splint

Mono-Splint, a feather-weight intravenous arm splint, simplifies administration of fluids and blood by holding arm outright and steady. It guards against accidental dislodging of the needle and the danger of cutting off flow. It is attached rapidly to bed spring or operating table arm. Adjustable vinyl strap secures arm at wrist and above elbow—eliminates need of tourniquet. Unit is furnished with smooth hand grip. Mono-Splint is made of plastic and requires no padding. It permits x-raying. Mastercraft Plastic Co.

1020. Vaporizer

One-gallon model designed to run all night without refilling. It gives off a steady, gentle, effective flow of steam and assures user of complete safety, since the boiling action is confined to inner plastic tube and the electricity is locked in. Has automatic shut-off unit. Can be used as humidifier and deodorizer. Hunt Manufacturing.

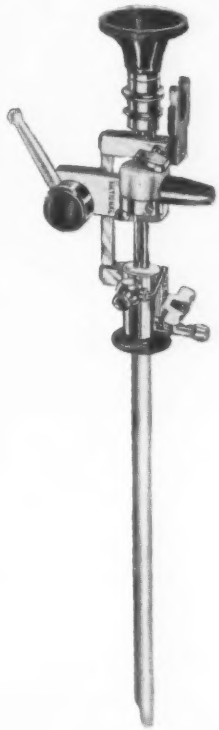
KLEAR-GLASS® *fog-proofs, cleans*

A single application to any glass or plastic surface protects against steam or humidity condensation. Comes in pocket applicators—spray bottles—wall dispensers. IT'S GUARANTEED!

THE BUCKLEY CORP. 607 FIFTH AVE. NEW YORK 17, N.Y.

1021. Rack and pinion type resectoscope

Rack and pinion type resectoscope is of the multiple type and for 24, 26 and 28 fr. sheaths. Loops, sheaths, telescope, rotating contact lamp, and working element are all interchangeable with corresponding components made by other manufacturers. Forward oblique telescope for these three instruments is listed separately and is said to provide bright, clear, wide vision. National Electric Instrument Co., Inc.



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This is why surgeons prefer Mueller instruments almost all over the world.

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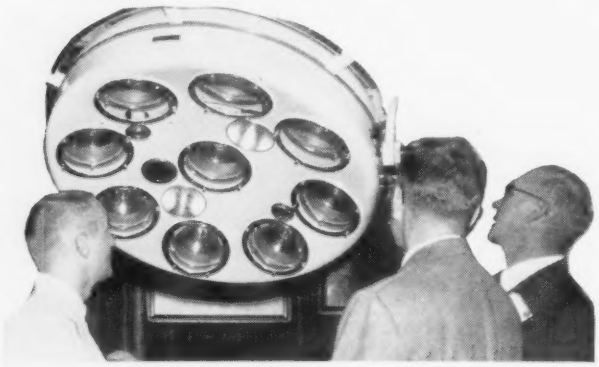
BRANCHES IN ROCHESTER (MINN.) • DALLAS • HOUSTON

The spirit of service displayed by this group of men is typical of hospital convention exhibitors. Shown meeting during the AHA convention in Atlantic City to plan better exhibits for next year are directors of the Hospital Industries Association (l. to r.): Roger C. Wilde, D. R. Zimmerman, Roland F. Simons, Harris L. Willits, Harlan Prater, J. J. Egan, Harry De Witt, Robert H. Brown, William E. Smith and Ray Hausted.

Betty Sofield, (l.) Dixie Cup Co., shows Sister M. Daniel, administrator, and Sister M. Rosarita, anesthetist, both of Memorial Hospital, West Point, Neb., the Dixie matched food service. Paper food service saves in hot water, soaps, detergents, and breakage. There is also a reduction in mealtime noise. No. 101.

William Fellows, M.D. (l.), assistant chief medical director, VA Hospitals, Washington, D.C., discusses the self-closing ropeless hamper bag with Peggy BeVier. The bag has no grommets to tear loose. It has been used in mental and nervous disorder sections of hospitals because of the safety factor of not having any ropes to tie. Self-Closing Ropeless Bag Co. No. 100.



Guy Cromwell (l.), assistant administrator, North Carolina Medical Care Commission, Raleigh, N.C., and J. Minetree Pyne, assistant superintendent, Duke Hospital, Durham, N.C., observe the operation of the Super Hanalux operating light. Burt Schomer (r.), Overseas Service Corp., explains how the nine pencils of light converge in the operating field. No. 102.

HOSPITAL INDUSTRIES ON PARADE!

If you are interested in receiving added information on any of the products in this convention review, just check the number on the post-paid reply card opposite page 53.

The very latest in hospital equipment and material was displayed in a multitude of booths at the American Hospital Association convention in Atlantic City. These pages highlight some of the new products for you. All photos by Nina.

William E. Randall, head anesthetist, Albemarle Hospital, Elizabeth City, N.C., walked into the Gilbert Hyde Chick booth to examine the new "monkey bar" that fits any bed—wood or metal. Mrs. Joseph L. Gitto, Atlantic City convention bureau, demonstrates how the bar allows a patient to swing to the outside of a bed without assistance. No. 103.

John M. Whitney, M.D. (l.), director of health department, Federal Civil Defense Administration, Battle Creek, Mich., discusses Renografin, the contrast medium for urography, with L. P. Brown, Squibb Co. Renografin is supplied in ampuls containing 20 milliliters of solution, packaged together with an ampul containing 1 milliliter of solution for sensitivity testing. No. 104.

Henry S. Nelson, administrator, Washington Sanitarium Hospital, Washington, D.C., finds comfort in the new two-position chair displayed at the Hospital Furniture Co. booth. Colin Campbell McLean, president of the firm, explains how the shifting of the backrest from low to high can be accomplished by fitting an envelope on the cushion over the back. Saran yarn is used for the upholstery because the plastic woven fiber resists stains and wear, washes easily, and will not flame. No. 105.

Hospital Industries on Parade!

News Pictures by Nina

R. L. Gross (l.), A. S. Aloe Co., points out the constant humidity and temperature control feature of the precision incubator to Harvey M. Radey, administrator, Eastern Memorial Hospital, Ellsworth, Me. The unit has an oxygen-limiting accessory which limits concentration to 40 percent maximum. No. 106.

Cornelia C. Pratt, purchasing agent, The Hospital Center, Orange, N. J., speaks to Mark Hopkins, Prolon Ware, about use of the dinnerware in hospitals. The ware is sanitary because there are no sharp corners or abrupt crevices to trap food particles, grease, or soap deposits. No. 107.

Two nurse anesthetists stopped in to hear about the disposable surgeon's cap with the absorbent sweat band from Norman Mitzman, Robert Busse Co. Verlie Hollandsworth (l.), is from the Retreat for the Sick Hospital, Richmond, Va., and Mildred Strubhar is from the Medical College of Virginia Hospital, Richmond. No. 108.

Maj. Ina Greene (l.), Sampson Air Force Base, Geneva, N.Y. and Maj. Mary L. King, Fitzsimons Army Hospital, Denver, Col., inquire about the new long-tip pipettes on display at the Glasco Products Co. John L. Coleman tells them about the delivery stems designed for trouble-free pipetting. No. 109.

Douglas Goode (r.), administrator, Jackson Hospital, Montgomery, Ala., is shown having a seamless Tubegauz bandage applied to his hand by Dyle Cronenweth, Scholl demonstrator. This gauze molds to the exact shape of the limb with special applicators, which also make it adaptable in dressing hard-to-bandage areas. No. 110.

Sister Ida Nolin, St. Peter's Hospital, New Brunswick, N.J. asked Gordon Cameron, Midland Laboratories, about Lohsuds, the liquid dishwashing compound which leaves no coating or sediment, according to manufacturer. No. 111.

Bob Bridwell (l.), Ethicon, Inc., demonstrated the Atraloc reverse cutting edge surgical needle to Mrs. George Goder and Lt. Col. Goder, surgeon, Tactical Air Command, Langley (Va.) Air Force Base. The cutting needle is flat on the inside of the curve. Since the tissue pressure is against a flat surface rather than a cutting edge, manufacturer says there is less chance for a needle to cut out of tissue. No. 114.

Frank L. Unzicker (center), administrator, Memorial Hospital, Elmhurst, Ill., greets Mr. Skeleton in the Clay-Adams booth. Leon Pullen (l.), administrator, Decatur and Macon County (Ill.) Hospital, and D. H. Palmer of Clay-Adams look on. The skeleton has areas of origin and insertions of the muscles painted on the bones on one side. No. 112.

John S. Knight (r.), assistant purchasing agent, Toronto, (Ont.) Hospital, discusses Sterl-air, the room deodorant, with S. M. Edison, president, S. M. Edison Chemical Co. Deodorant is said to be non-toxic, and odorless. No. 113.

William Harrigan (r.), Shampaine Co., is shown pointing out the high-speed autoclave with steracyclinic control to Jay J. Blakely, assistant director, East Orange (N. J.) General Hospital. The unit is fully automatic, permitting a minimum of attention by the operator. No. 115.

Hospital Industries on Parade!

News Pictures by Nina

Harold Horrocks (l.) assistant director, Somerset (N. J.) Hospital, examines the White silent oval bucket. Fred W. Harris explains how the bucket is fully insulated against noise. No. 116.

A. W. Palin (l.), J. Sklar Mfg. Co., discusses the copper-plated jaw needle holder with Matilda Welinske, anesthetist, Resurrection Hospital, Chicago. The jaw holder is plated with copper for easy identification on the instrument tray. No. 117.

Marion Martin (l.), Chuck-A-Bed Corp., tells Julia Gaissert, anesthetist, Georgia Baptist Hospital, Atlanta, about the disposable bassinet that eliminates laundry and expense when provided for each newborn infant. No. 118.

James Dwyre (l.), Cushman & Denison Mfg. Co., tells John K. Deegan, M.D., chief of professional service, VA Hospital, Castle Point, N.Y., and his wife about the Flo-master hospital marking pen used to mark uniforms, linens, and equipment. Said to mark on many types of surfaces—whether metal, plastic or fabric. No. 119.

C. Parker Sheppard (r.) comptroller, Lutheran Hospital, Baltimore, inquires at the Burroughs booth about the microfilm reader. Bill Sproull tells him about the indexing meter that makes it possible to locate—rapidly and precisely—an indexed document image of any 8, 16, and 35 mm. film. No. 120.

Jack Egan (l.) and Vince Antonell (center), representing S. Blickman, Inc., point out features of the coffee urn to August Hoenack, United States Public Health Service, Washington D.C. The urn provides its own hot-water supply. It has a sanitary, full-draining, easy-to-clean container. The permanent stainless steel liner has its bottom sloped to a tangent draw-off. The manufacturer says that it gives you a sanitary, full-draining, easy-to-clean container for coffee. Urn has a plastic handle on the polished stainless steel cover, and a scratch-resistant black skirt. No. 121.

Happy Watson (l.) Presco Products, demonstrates the featherlite screen with snap-out curtain rods to Horner E. Alberti, administrator, Winchester (Va.) Hospital, and Mrs. Alberti. The snap-out curtain rods permit split-second replacement of panels. Panels come in a variety of colors and in a colorful circus motif for the nursery. No. 124.

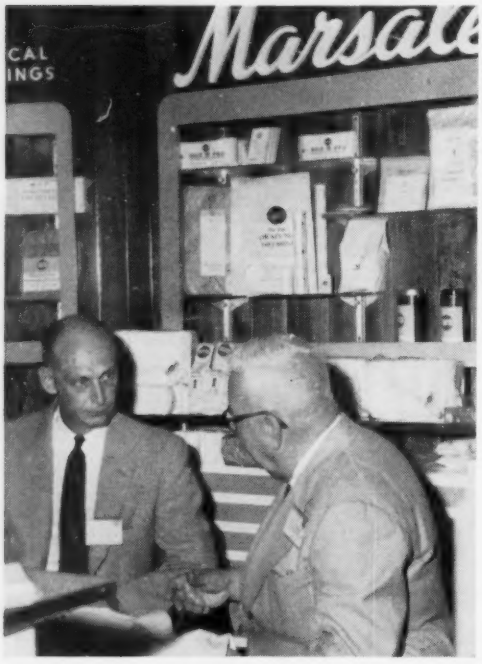
Featured at the Macalaster Bicknell booth was a cylindrical flask for manufacturing sterile solutions. The company has just changed from its old pear-shaped bottle to this new shape. Ed H. Heyd (l.), administrator, Children's Hospital, Cincinnati, O. discusses the bottle with H. P. Murdock. No. 122.

Sister M. Reginald, Sisters of Mercy, Dyer, Ind. stopped in at the Goodman-Kleiner Co. booth to find out about the imperialyte vinyl hospital sheeting that is treated with Sub-Du to make it permanently bacteriostatic and fungistatic. B. D. Cagen (l.) and Gerald Goodman answer her questions. No. 125.

Chloromycetic intramuscular, specially prepared microcrystalline form of chloramphenicol intended for suspension in an aqueous vehicle, was shown to Roy T. Reeder (l.) business manager, St. Mary's Hospital, Clarksburg, W. Va., by Harmon Ferer, Parke Davis & Co. No. 123.

Hospital Industries on Parade!

News Pictures by Nina



Autoclave wraps at the Marsales booth attracted the attention of C. L. Bosworth, purchasing agent, C. S. Wilson Memorial Hospital, Johnson City, N. J. G. W. Jackson (r.) explained how the heavy two-ply muslin wraps take the place of old sheets used in some hospitals. No. 126.

W. C. Shea (center) and R. E. Hamm, Colson Corp., point out features of the surgical instrument table which comes in sizes to cover all phases of surgery, to Edwin F. Saunders, administrator, Massena (N.Y.) Hospital. Manufacturer says that table gives more working space, and that the conductive casters are safe and noiseless. No. 127.

Jim Kennedy (center), American Hospital Supply Corp., tells Amelia Carter, superintendent of nurses, Surburban Hospital, Bethesda, Md., and Richard H. Ward, assistant vice-president, Roosevelt Hospital, New York City, about the In-Bed Scale for weighing the bedridden. This scale can be wheeled around on swivel wheels by one person. No. 128.

Individually wrapped sterilized knuckle bands attracted the attention of Barbara Mercer, superintendent, Group Health Service, Seattle, Wash. K. K. Demmel, Medical Fabrics Co., Inc., wrapped her finger with a Flex-Aid knuckle band. No. 129.

An anodized aluminum 20-qt. mixer caught the eye of Warren W. Butler (l.), purchasing agent, Geisinger Memorial Hospital, Danville, Pa., as he talked to G. B. Fox at the Hobart Mfg. Co. booth. No. 130.

Sister Rose St. Francis, R.N., St. Francis Hospital, Trenton, N.J. and Sister Mary Pacifica, purchasing agent of the same hospital, listen to Merle W. Else, Physicians and Hospitals Supply, tell about new cabinet for insuring safety in dispensing narcotics and barbiturates. It provides safe, locked storage for narcotic tablets and vials together with large capsules and tablets. Has special cylinder lock and an attachment to secure it in drawer or cabinet. No. 131.

Margaret Kenny, dietitian, St. Agnes Hospital, Baltimore, Md. asks Ken Fischer, Diversey Corp., about Pyroneg, the specially formulated detergent compound for cleaning infant nursing bottles and equipment in the formula room, and for general cleaning in surgery. It is colored pink to prevent any confusion with colorless compounds regularly used in preparing medicinal and food formulas. No. 132.

Orville Bakko (r.), administrator, Kadlec Hospital, Richland, Wash., stops at the Trion booth to get information on the unit to provide electronically cleaned air, with dust, dirt, smoke, pollen, bacteria, and virus eliminated. Cliff Stephens tells him how maintenance of strictly antiseptic conditions in operating and delivery rooms can be achieved by cleaning the air. The company reports that with a Trion unit the initial cost is practically the only cost. No. 133.

Andrew Mezei (l.), assistant director, Mt. Sinai Hospital, New York City, discusses the cardiac pacemaker and defibrillator with Leon Ullman. The cardiac alarm is activated by electrical impulses from the ventricles, and provides a visual and audible signal of each heart beat. The combination unit can be used for emergency resuscitation of the heart during circulatory arrest. For ventricular standstill it is treated externally with the cardiac pacemaker, and for ventricular fibrillation it is treated internally with the cardiac defibrillator. Institutional Products Corp. No. 134.

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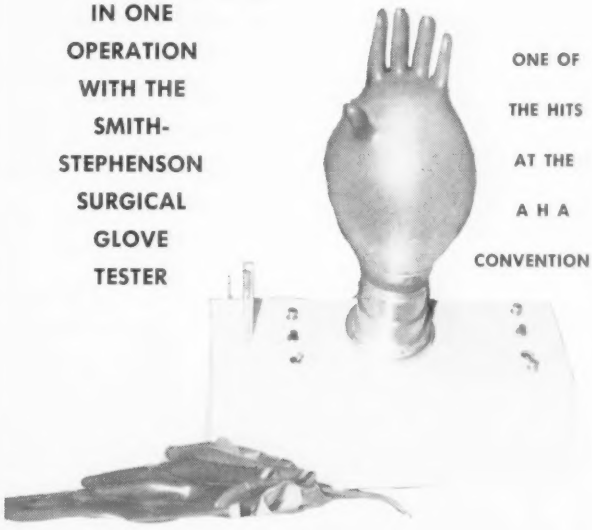

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FILMS AND NEW LITERATURE

1030. Red Cross swimming manual

Swimming for the Handicapped provides information and guidance on how to teach handicapped children and adults to swim. Based on a Red Cross swimming program started during the war, physicians, physical therapists and water safety instructors assisted in preparation of the manual. Appendix has glossary, pictures. American National Red Cross.

1031. Quantity cranberry recipes

Cranberry sauce, whole and jellied recipes for quantity servings are available in a monthly series. Pie, salad and relish recipes are included. National Cranberry Assn.

1032. Masonry brochure

Waterproofing problems and solutions are discussed in *Masonry Preservation*, a 16-page illustrated booklet based on laboratory and field reports. Covers such subjects as effects of water absorption from without and methods of caulking and pointing joints prior to application of masonry preservatives. Tremo Mfg. Co.

1033. Billing and sales statistics folder

Punched-card methods for preparing mail invoices are described in *How to Cut Costs on Billing and Sales Statistics* by Remington Rand. Card-o-Matic, calculating punch and other equipment available are listed and explained. Remington Rand.

1034. Porcelain sink bulletin

New chemical porcelain laboratory sink catalog tells exactly how Stoneware lab sinks are made, pictures the company's complete line and includes dimensional drawings and charts for sinks, outlets, drains and traps. U. S. Stoneware Co.

1035. Diaflo unit bulletin

Describes operation, construction and design features of new Diaflo unit conditioners for summer cooling, winter heating. Includes installation drawings and data tables. American Blower Corp.

1036. Effective methods for cleaning glassware

Professional Cleansing of Biological Glassware explains various cleaning methods for hand and machine washing of utensils used in biological and serological technics. Includes descriptions of products designed for cleaning by professional workers. Finger Lakes Chemical Co.

1037. Oxygen therapy film

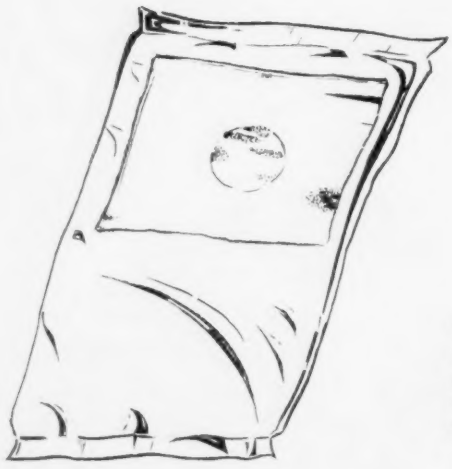
Purpose and Techniques of Oxygen Therapy is an educational color, sound slide film; directed to nurses and inhalation therapists as a basic training aid. Ohio Chemical & Surgical Equipment Company.

1038. Direct line to decision

This IBM film shows how electronic data processing machines can help management receive accurate information and thus reduce expenses, create new markets, etc. more efficiently. 16 mm. IBM.

1039. Infant nutrition film

Available free of charge to hospitals and clinics, *Mealtime for John Henry* covers basic infant nutrition and the how and why of feeding supplementary baby foods. Gerber Products Co.



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Invented by
Elise Sorensen, R.N.

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- Disposable—easy to change
- Reasonably priced

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*Pat. Pend.

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SOLE AGENCY FOR U.S.A.

1040. Oil-treating of linens

Four-page bulletin contains information on the oil-treating of linens during the laundry process with Penn-Drake linen oil. Bulletin includes information on how product is used. Pennsylvania Refining Co.

1041. Color slide sequences

Eastman Kodak has put out a pamphlet with suggestions for the preparation and use of color slide sequences in educational presentations. Leaflet stresses advantages of the two-by-two-inch slides. Also included is a listing of free Kodak literature. Eastman Kodak Co.

1042. Anesthesia periodicals

Anesthesia Items, and *Inhalation Therapy Topics* is devoted to information on the latest technics, procedures and developments in the fields of anesthesia and oxygen therapy. Bulletins can be easily filed in a loose leaf binder. Ohio Chemical & Surgical Equipment Co.

1043. Favorite apple desserts

Favorite Apple Desserts Served in Famous Eating Places. This 36-page booklet presents recipes for apple pies, apple cakes, apple puddings and other apple desserts. Booklet features dishes from 24 eating places throughout the country. Processed Apple Institute.

1044. Commercial cooking equipment

The Montague Co. has come out with a colorful book on its line of cooking equipment. Included are gas ranges, bake ovens, roast ovens and Chinese ranges.

1045. Radiation measuring equipment

A 48-page catalog describing Nuclear Instrument and Chemical Corp. line of radiation measuring equipment for medical and research use has been issued. Included are photographs and descriptions of the individual instruments.

1047. Anesthesia film

Ether for Anesthesia is a black and white, 16 mm. sound film describing the development of the production of ether since 1846. Available for showing to professional and student groups. Mallinckrodt Chemical Works.

1048. Institutional mix film

The Magic of Mixes is an 18 minute, 16 mm color-sound film narrated by John Cameron Swayze. It deals with baking mixes. Film is available for showing under supervision of Pillsbury representative. Pillsbury Mills, Inc.

1049. Portion meat film

Fresh Frosted Meats for the Food Service Industry, is a 16 mm color-sound film on portion meats for the quantity food service. Film demonstrates proper care and cookery technics along with new ways to serve meat. Armour & Co.

HOSPITAL SALES REPRESENTATIVE WANTED—Age 28-45 years; for nationally known food manufacturer. Must reside in Eastern United States. Should be experienced in hospital organization and food procurement policies. College degree preferred but not necessary. Travelling involved. Please reply giving age, experience, marital status, education, remuneration expected and references. Excellent opportunity for right personality. Write Box 16, HOSPITAL TOPICS.

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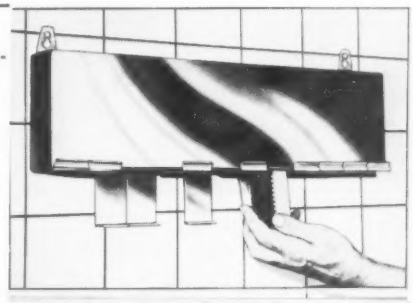

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OB DEPARTMENT

Remodeled Nursery Provides More Room, Greater Safety for Infants

● The newly remodeled nursery at Chicago Wesley Memorial Hospital features a special sterile examining area where doctors can examine infants without actually entering the nursery. A larger, improved teaching area for doctors and nurses has also been added, as well as a new chart room and 11 improved oxygen outlets for oxygen, suction, and compressed air.

Named the Champley Unit, in honor of Joseph M. Champley, Wesley's maintenance director, and the man responsible for the excellent engineering behind many of the improvements, the nursery has 55 bassinets, including those in the special area for prematures.

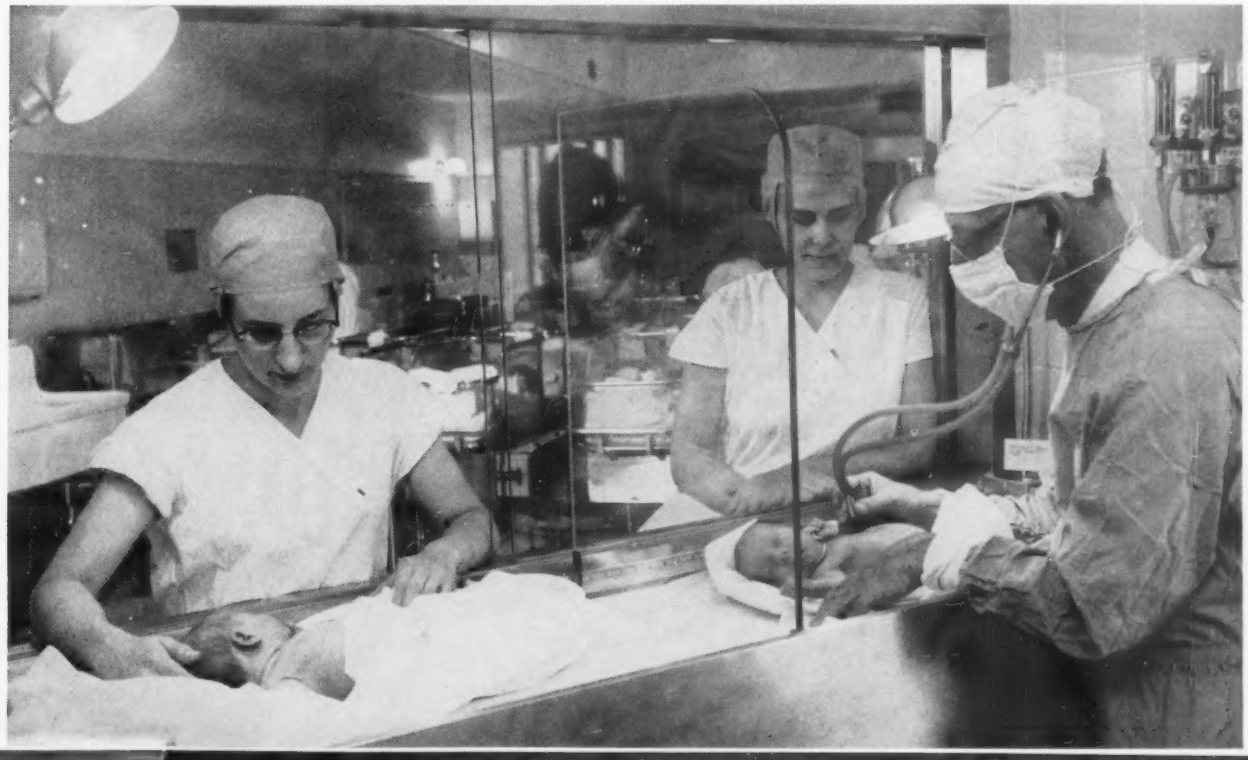
According to John L. Reichert, M.D., chairman, department of pediatrics, the chief aim in remodeling was to achieve even greater isolation for the newborn and thus lessen the danger of outside infection. To accomplish this, one single point of contact between infants and doctors has been established—the sterile examining area pictured below. Doctors coming in from the outside never enter the nursery; instead they scrub in the chart room, don a sterile gown, mask and cap and enter the examining area. Infants are placed in the window between the sterile area and the nursery and the glass separating the two rooms slides open. (For a description of similar arrangements, see HOSPITAL TOPICS, November, 1954, p. 44 and March, 1955, p. 69—Ed.)

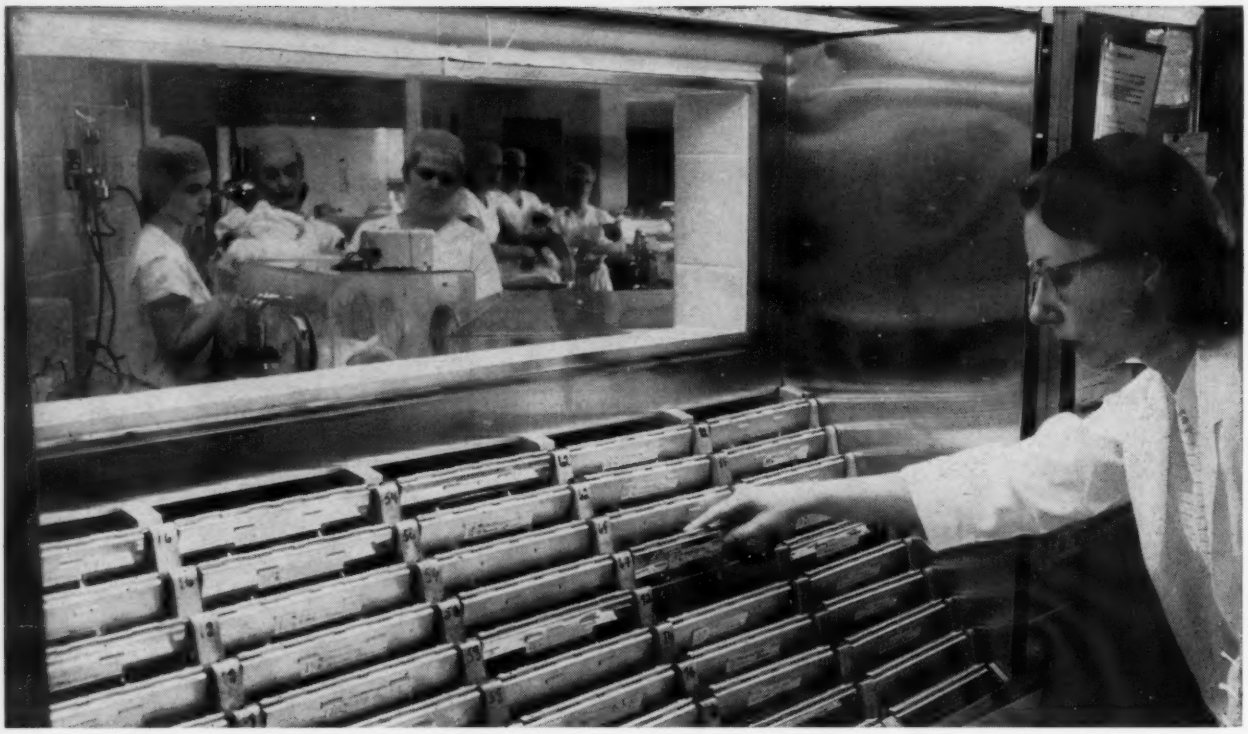
After each examination the doctor scrubs at a sink in the examining area. A different sterile stethoscope is used for each infant. Dr. Reichert says that there has been a significant drop in infection since this new technic has been in use.

Another important improvement is the addition of new oxygen-suction-compressed air units. There are 11 of these, so placed that one is within easy reach of every bassinet. And, in order to eliminate the danger of any infant receiving too much oxygen, staff members and the manufac-

(Continued on next page)

Below: Nurses place babies to be examined in the window between the nursery and the doctor's examining area. Here Gerard N. Krost, Chairman Emeritus, Department of Pediatrics, examines an infant. Note glass windows between the two rooms.





Above: Nurses and doctors can look from the chart room directly into the premature area of the nursery. Nurses frequently place messages on the inside of the window, too, where doctors will be sure to see them before entering the examining area.

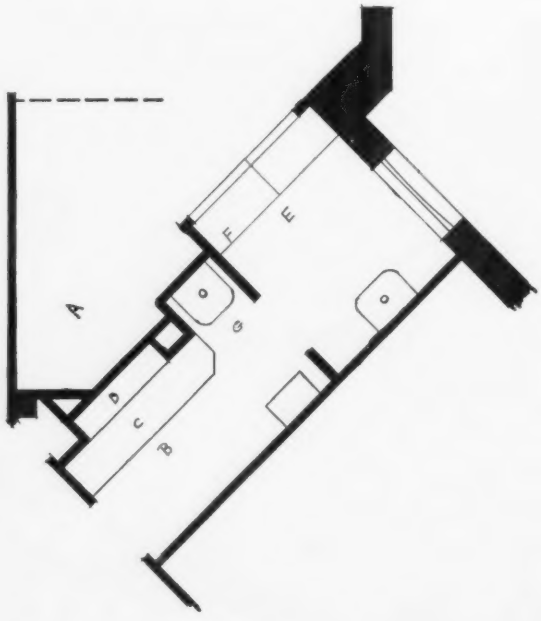
turer* have devised an entirely new unit—the first of its type in use in any hospital nursery. It produces adequate "fog" humidity with the use of compressed air instead of dangerously high amounts of oxygen. (For picture of one of the units in use, see opposite page.)

Greatly improved teaching facilities are another new feature. New mothers, medical students, and student nurses can now sit in the corridor outside one of the nursery's large plate-glass windows and watch instructors inside demonstrate proper care of the newborn. A special formula and examining table, complete with built-in bathtub, has been built inside the nursery for these demonstrations. A two-way communication system enables the audience to listen to lectures and participate in question-and-answer periods.

At the opposite end of the nursery is the new chart room. A window in this room looks into the enlarged area for prematures, so that doctors can keep a closer check on these infants. Nurses also frequently place messages for the doctors on the inside of the window.

Mabel Fenn, R.N., head nurse, nursery, has charge of some of the youngest pediatric patients on record. In the first hour of life, when the death rate is highest, Wesley's O.B. and pediatric departments assume joint responsibility in caring for the newborn infant. After that, however, the baby becomes a patient in his own right and officially enters the pediatric department. Special forms are used for entering the infant's record and history, and his chart is kept in the chart room completely separate from that of his mother. The staff believes that infants are entitled to this independent status, and doctors and nurses find the separate charts convenient and time-saving.

Below: Portion of the floor plan, showing (A) the premature nursery area; (B) the chart room with (C) the charts and (D) the window overlooking the nursery. Doctors scrub and don gowns (G) then enter the examining area (E). (F) is the window where babies are placed.



*Puritan Compressed Gas Corporation, Chicago, Ill.

Above: Teaching area with special built-in table faces corridor where audience can sit and watch demonstrations on infant care. Nurses in this picture are using one of the new oxygen suction units described on the opposite page.

Below: One of the forms attached to each infant's chart. Babies have completely separate forms and charts at Wesley, are regarded as regular pediatric patients by the staff.

Form 1161 CHICAGO WESLEY MEMORIAL HOSPITAL
IN MEMORY OF WILLIAM DEERING AND ABBY DEERING HOWE
CHICAGO

NOURISHMENT CHART

PEDIATRICIAN_____ TAG NO._____ NURSE_____

Day	Date	Stools	Urine	NOURISHMENT Hour												Cord	NOTES
Birth				Water													
				Mother's milk													
				Artificial feeding													
1				Water													
				Mother's milk													
				Artificial feeding													
2				Water													
				Mother's milk													
				Artificial feeding													
3				Water													
				Mother's milk													
				Artificial feeding													
4				Water													
				Mother's milk													
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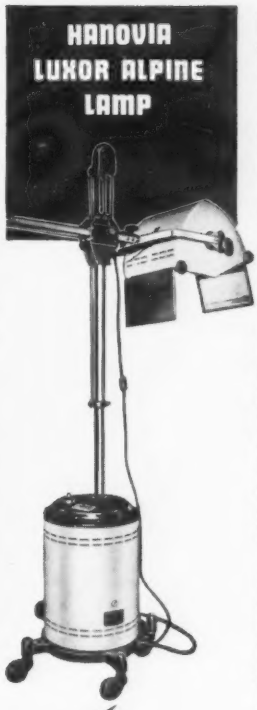
				Artificial feeding													
9				Water													
				Mother's milk													
				Artificial feeding													
10				Water													
				Mother's milk													
				Artificial feeding													

Code: Amount: l—large s—small sm—medium Color: mec—meconium b—brown g—green y—yellow Consistency: f—formed s—soft liq—liquid l—loose



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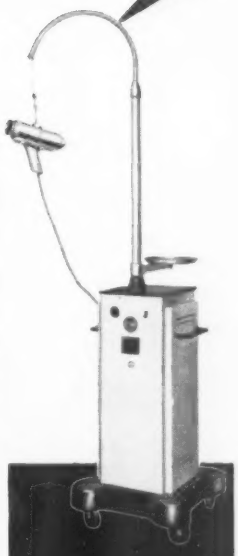

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Needed: Nurses Who Know Rehabilitation

By Mary Stewart, R.N.*

● The present emphasis on rehabilitation has pointed very dramatically to the need for the training of nurses in the field of pediatric rehabilitation. The philosophy of rehabilitation, that of "helping the patient to help himself," is of the utmost importance and should be acquired in the undergraduate period of training.

In order to teach the philosophy and skills of rehabilitation, ward instructors, clinical instructors, and head nurses must first be thoroughly oriented in the total philosophy and skills of rehabilitation. These skills should be a part of all nursing training, regardless of the expected area of specialization. For instance, supposing a child who has been wearing braces is admitted to a general hospital for surgery. If he is not given proper supportive positioning postoperatively and encouraged and trained to do as much as possible for himself, he may, in a few weeks, lose the gains made slowly over many months of training.

On a graduate level opportunities are offered to nurses who wish to acquire rehabilitation skills, through training courses and seminars. On an undergraduate level opportunities for short observation periods are often obtainable. These do not take the place of actual work experience, but they do offer some opportunity to see what can be done to help the physically handicapped. The Children's Division of the Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center, through funds provided by the Association for the Aid of Crippled Children, offers a six-month fellowship for training nurses in rehabilitation, but can accept only one trainee at a time, or two in a year.

In writing about pediatric rehabilitation it is always difficult to know whether to begin with the patient, the program, or a definition of rehabilitation. Since the philosophy of rehabilitation precedes the skills growing out of it, the definition seems the best choice. There is a philosophy of rehabilitation which contains or should contain an operational definition, and there are also methods by which this philosophy is put into practice. Unless the philosophy and the method are closely inter-woven, one of them may be wrong.

DEFINITION OF PEDIATRIC REHABILITATION

The definition of pediatric rehabilitation as it is envisioned in the Children's Division is that of helping the child achieve independence in all areas of social contact. This means, then, not only a growing independence in terms of the physical or mental status, but also in the area of interpersonal relationships. Part of the task of rehabilitation, in addition to developing technical skills, is to supply as many opportunities as possible for the child to make up some of the deficiencies which may have resulted from minimal social contacts with adults outside the family and with his peer group.

EVALUATION PERIOD

When one begins to think about programming for any child, it becomes necessary to determine the level of proficiency the child now has in all testable areas. In order to do this, there is a period of evaluation which may take as little as three and one-half days and as much as two weeks, depending upon the ability of the staff members to establish rapport with the child.

(Continued on next page)

Below: This little boy, an amputee, is learning how to come down steps, under the guidance of a physical therapist. He is also taught to care for himself as much as possible, to be as independent as his age and handicap will permit.

*Miss Stewart is educational director, Children's Division, New York University-Bellevue Medical Center, New York City, and administrative assistant, Association for the Aid of Crippled Children.

Above: This little girl, who has congenital absence of all four extremities, practices self-feeding. Patients are taught according to their chronological age and intelligence level.

PEDIATRICS continued

We conceive of rehabilitation as beginning at the bedside. Therefore, the first evaluation is done by the pediatrician, who is concerned not only with the child's present condition but also with his developmental history from birth. Many times it is possible, through this examination and history-taking, to pick up cases of slow development which may point to a mental retardation rather than to a lowered function because of brain injury or the like.

Since it does not contribute materially to a child's independence in ambulation to be able to walk 20 to 30 feet in the parallel bars if preceding this someone must bathe him, feed him, brace him, put him in a wheel chair, and take him to the physical therapy room, one of our earliest concerns is with the child's ability to perform bed and wheel chair activities. This is done on a developmental level, with a full knowledge of the expected performance for the child's chronological age. We never ask a child to do anything or to learn anything which he would not normally have been doing if he were not handicapped. In this way we take full advantage of maturation levels but do not push the child beyond his ability to perform. Many of the things that are important in terms of independence seem very simple.

The nurse's evaluation of the child is directed toward finding out his proficiency in bed and wheel chair activities. One of the tests is to find out whether he can roll over in bed. This is particularly important when there is sensory as well as motor loss, because if the child is unable to turn himself it means that someone—the nursing staff if he is institutionalized or the parents if he is at home — must turn him every two to three hours throughout the day and night if decubiti are to be prevented.

Similarly, one is concerned with whether or not the child is able to sit up in bed, because if he cannot, he cannot be taught at this time to put on his braces. These tests extend to toileting, dressing, and the general hygiene tasks of washing, brushing teeth, etc.

The physical therapist's evaluation of the child's performance is concerned with muscle re-education, range of joint motion, ambulation and elevation, and general wheel chair activities.

The occupational therapist is primarily interested in the function of the upper extremities, and again this testing is done on a developmental task basis. With the main goals of feeding and dressing, one of her principal concerns is with tests to discover whether the child has a basic hand-to-mouth pattern and whether he is able to button, zipper, buckle, etc.

Each child has a speech and hearing evaluation. Gross hearing tests are given and are followed by audiometric testing if, in the opinion of the therapist, there is reason to suspect hearing loss. This is particularly important in the vocal but non-language child. It must be determined whether the lack of language is a result of deafness or an inability to reproduce the sounds which are heard.

Intelligence and personality tests are given to each child to find out the level of his functionings and to help the team understand how he is functioning and gauge the program for him accordingly. A variety of tests are used in this evaluation, and it is usually left to the clinical psychologist to decide what tests will give the most information about the child and his world. With the preschool child the Gesell Development Scale or the Vineland Social Maturity Scale may be used; with the older child the Stanford-Binet (Form L or M 1937 revision) or the Wechsler Intelligence Scale for Children may be chosen.

The Draw-a-Person test, the Rorschach, and the Bender-Gestalt are used to help us understand more about the child and the way he sees himself. Only by understanding how the child perceives himself in relation to his world, his family, his friends, and his disability can we help him.

PARENTS' UNDERSTANDING ESSENTIAL

One of the ways in which pediatric rehabilitation differs from adult rehabilitation is that while one works directly with the child effective work can only be done through the parents, regardless of the child's age. Unless the parents are able to see the projected goals for the child and only insofar as they can cooperate in the program can it be wholly successful. If the parents are not in full accord with the program, it is likely that when the child leaves the training center they will revert to previous patterns and much of the training will have been wasted. No rehabilitation can be said to be accomplished until the child is doing in his own home what he was taught to do in the training center.

The psychiatrist, in his interviews with the parents and the child, who are seen separately, attempts to find out from the parents how they see the child, what their attitudes are toward him and toward his disability, his relationship with his peers or siblings, and their general mode of management. The interview with the child is carried out along much the same lines, except that in this instance the psychiatrist is interested in obtaining the child's point of view. The way in which the child perceives his parents, himself, and his siblings may have a profound effect upon the rehabilitation program.

WHAT DO PARENTS EXPECT?

The social worker also interviews the parents and is interested in obtaining more understanding of the family patterns and the authority figures within the home, the physical setup of housing, and, perhaps most important, if any one fact can be said to be more important than

another, what are the parents' expectations from the experience at the Institute. If the parents' expectations are in excess of the child's potential, there will be need for much interpretation and counseling of the parents to help them toward a more realistic goal for the child.

With this in mind we have carried on a very active program of parent counseling. The choice of counselor for the parents depends somewhat upon the nature of the problems presented. It may be the psychiatrist, the clinical psychologist, or the social worker. After evaluation has been completed, the staff sit in conference to determine what the child's program should be. The number of sessions per week in any therapy depends somewhat upon the child's ability to identify the focus of the problem. Sometimes it is mainly a problem of physical restoration, at which point the problem is somewhat simplified.

On the other hand, if the child's problem seems to be largely in the area of emotional disturbance, the physical restoration problem may have to be held in abeyance until some of the stresses on the child rave been relieved through counseling or psychotherapy.

The difference between the therapeutic goal as established by the team and the parents' expectations may be a measure of the disappointment, the frustration, and the "shopping around" parents will do. If in the parents' minds rehabilitation means normalcy, no matter how much independence is achieved, it will always fall short of the parental expectations. Since the team will place the therapeutic goal as high as it can, the need is for the lowering of the parents' goals to realistic levels in more accord with the child's potential. This can only be achieved by warm and understanding counseling over time.

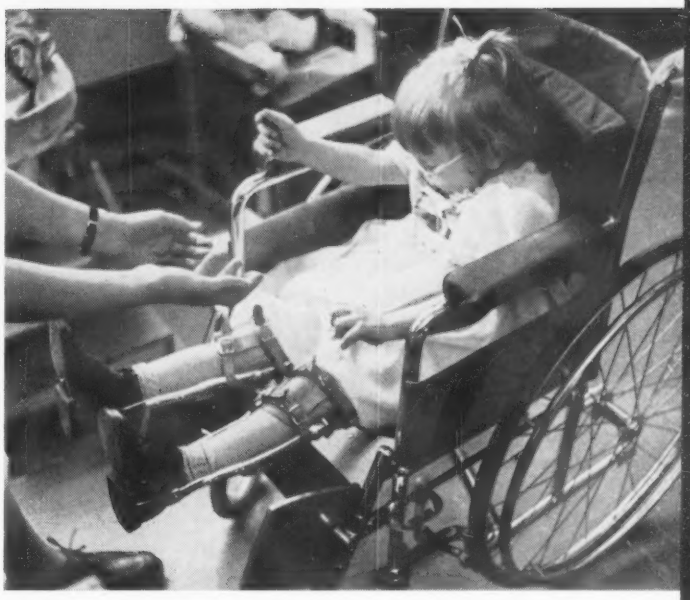
PLANS FOR RETURNING HOME

Plans for the child's return home are made just as carefully as plans for his admission to the Institute. When possible this is done two or three weeks in advance of the actual discharge date. This provides an opportunity for the parents to spend time with each staff member and become thoroughly familiar with the program which is to be carried out at home. If the parents live outside of New York City, we usually ask them to spend two or three days at the Institute, so that there is ample opportunity provided for parents to have their questions answered.

If the parents do not feel confident to carry out the exercise program by themselves, they are offered the services of a visiting nurse or visiting physical therapist if such is available in their community. At the time of discharge a return appointment is given. For the child who lives in New York City this is usually in one or two weeks' time. If the child lives outside the state, he is usually given an appointment to return in two or three months, depending on the individual needs.

SPECIAL RESPONSIBILITIES

We are still in the process of delineating the special responsibilities of the rehabilitation nurse or the pediatric nurse who is especially interested in rehabilitation. At the present time some of the things which are included in her training period are the testing of the child, on admission and discharge, in bed and wheel chair activities, teaching the activities that he is not able to perform which are appropriate for his age; the instruction and training of children in the bladder and bowel program; teaching the application, removal, and care of braces, taking the responsibility for ordering and repair of wheel chairs, and instruction of the child in dressing and in personal hygiene.



Above: Learning independence in wheel chair activity is an important phase of the rehabilitation program. Cerebral palsey patient shown here is being trained by a physical therapist.

Below: Two young patients learn to play cooperatively under the supervision of an occupational therapist. Learning to get along with others is an integral part of the pediatric rehabilitation program.

She also has a teaching responsibility toward attendants, student and graduate nurses, parents, and other staff members. She attends and participates in ward rounds, staff rounds, and evaluation conferences. There is also a great deal of emphasis upon the concept of teamwork, with the view to working harmoniously with other staff personnel whose chief responsibility lies in doing their utmost to help the physically handicapped child and his parents.

As more programs of rehabilitation develop, more and more nurses will be needed to carry out this important role in the rehabilitation process.

THE LAB

The Value of Routine Hematology

By R. L. Mainwaring, M.D.*

● The diagnosis of many blood diseases is difficult without an adequate history and physical examination, but the laboratory is a major factor in such diagnosis. Routine hematology means different tests to different laboratories. I shall assume it includes hemoglobin, hematocrit, white blood cell count, and differential count.

A great deal of recent literature has concerned inaccuracies in various hematologic tests and advocated changes in what is routinely ordered or performed. Although we recognize the limitation and errors of many of the tests, the clinicians still request them and at times even demand them. I shall discuss two routine studies which I find most useful, with the understanding that when a complete hemogram is requested we must use the studies which will give us the tools to compute the absolute blood indices.

*Dr. Mainwaring is pathologist and director of laboratories, Oakwood Hospital, Dearborn, Mich., and assistant professor of pathology, Wayne University College of Medicine, Detroit. His paper was presented before the Conference on Laboratory Service at the 1955 Tri-State Hospital Assembly in Chicago.

The real value of routine hematology rests with the observant, alert technician who recognizes abnormalities and brings them to the attention of the pathologist. I shall discuss abnormalities which can be detected in the routine performance of the hematocrit and perusal of the stained blood smear.

The hematocrit or volume of packed red cells/100 ml. of blood is a simple procedure and depends upon the centrifugation of a known volume of uncoagulated blood until the corpuscles are packed to a constant volume. The recommended time for this is centrifugation for half an hour at 3,000 revolutions per minute, which gives the nearest practical approach to a true packed cell volume.

There are several layers formed in the hematocrit tube. The first or uppermost is a layer of fat; the second is a zone composed of plasma; the third layer consists of a thin layer of leukocytes, platelets, and some nucleated red blood cells; the fourth layer is a thin black layer of reduced red blood cells which are changed by the metabolic activities of leukocytes in that region, and the fifth layer is of oxygenated red blood cells.

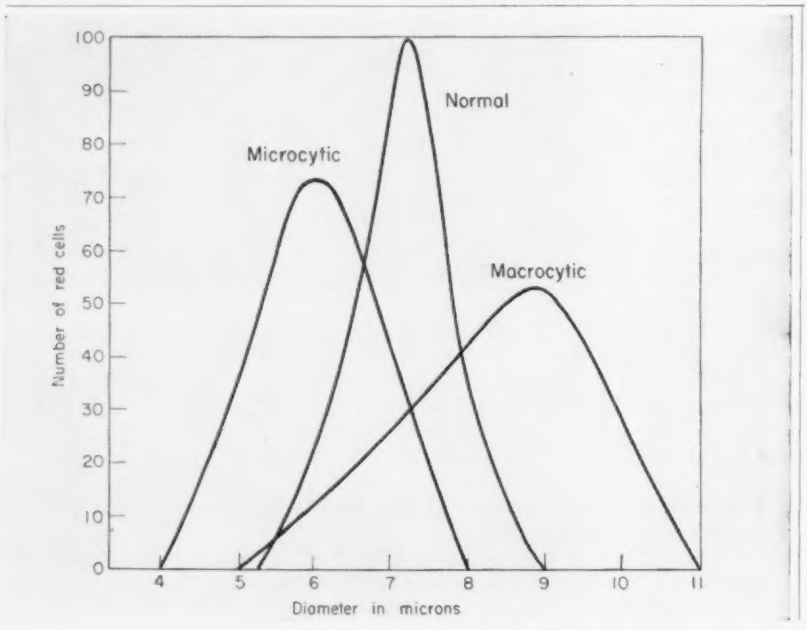
This examination is one of the most accurate and reproducible of laboratory tests. With use of the Wintrobe tube, much information can be gained with this one simple examination. A sedimentation rate can be done prior to spinning. By examining the various components after contrifugation, one can obtain various facts, such as: The layer of plasma and fat can indicate lipemia; the color of the plasma will indicate the presence of jaundice, and the volume of the packed red cells gives some indication of anemia when it is present.

Polycythemia can also be determined from this simple examination, as well as the marked changes occurring in leukemia.

The normal values are considered 47±5 percent for the male and 42±5 percent for the female. In the layer of white blood cells and platelets there are approximately 10,000 white blood cells/mm. Therefore the normal layer measures from 0.5—1 mm. in thickness.

Three formed elements should be noted on the stained smear: the erythrocytes, the white blood cells, and the platelets. I shall limit the discussion to the erythrocytes. If the smear is examined carefully, you will notice that even in the normal patient there is a variation in cell size. With the Price-Jones curve it has been determined that the mean cell diameter is approximately 7.3 microns. However, there are many smaller cells and many larger ones, for this is just an arithmetical mean of the red cell diameters, and certainly all the cells must not fit within this rigid measurement.

The Price-Jones curve (shown at left) is rather a laborious and highly technical method of measuring the red blood cells and was used to determine the size of red blood cells in the normal and pathological state. As an example, in the microcytic anemias, although most of the cells are smaller



than normal, a fairly large number fall in the normal range, even some above the normal mean of 7.2 microns.

Again, in macrocytic anemia, where the mean diameter is 8.3 microns, many cells fall within the normal range and some are smaller than normal; so when we speak of macrocytosis, microcytosis, and normocytosis, we are really speaking of the mean cell diameters. By inspection of the stained smear one can determine roughly the presence of macrocytosis or microcytosis, and when this is noted the absolute values should be determined to corroborate these findings. These findings are more significant when associated with an anemia and tend to indicate the nature of the anemia and the reaction of the bone marrow.

Anisocytosis is another significant finding when noted in the smear, and is frequently seen when there is accelerated regeneration of erythrocytes. Since the blood is a heterogeneous group of cells, there is normally some variation in size, but an exaggeration in size is considered abnormal and is especially marked in pernicious anemia.

Poikilocytosis, or a variation in shape, is usually seen in the more severe anemias and should always be noted on the report returned to the ward.

Another variation seen is the target cell, a combination of poikilocytosis and hypochromia, which may be found in various liver diseases, postsplenectomy, and in association with sickle disease.

Spherocytosis, another change in form, indicates a cell which is more spherical than that usually seen. These cells are characteristic of congenital hemolytic icterus and can also be found in acquired hemolytic anemia.

That the erythrocyte before it is hemolyzed assumes a spherical shape is readily shown in the laboratory, as these cells are much more easily hemolyzed by hypotonic saline solutions than are the normal red cells. The relationship between the diameter and the thickness of the cells remains fairly constant, although there may be changes in volume. As an example, in macrocytosis, although there is an increased diameter, there is an increased thickness, and the relationship between diameter and thickness of the cells remains approximately that of the normal cell.

Again, in microcytosis, with the decrease in diameter there is a proportionate decrease in thickness which maintains the ratio. This relationship preserves the biconcave form of the red cell.

However, in certain pathological states the relationship of the diameter and thickness changes. This change is seen when there are target cells (leptocytes) in the various diseases previously listed and also when there are spherocytic cells found in congenital hemolytic icterus and in acute hemolytic anemias. The diameter is either decreased or increased at the expense of the thickness of the cells. This results in various fragility changes. The spherocytic cell is much more easily ruptured in hypotonic saline solution, whereas the flat target cell is much more resistant to that solution and will require a more hypotonic solution to cause it to become spherical.

Another finding which is of use to the clinician in deciding the function of the bone marrow is the presence of polychromatophilic cells—cells in

(Continued on page 79)

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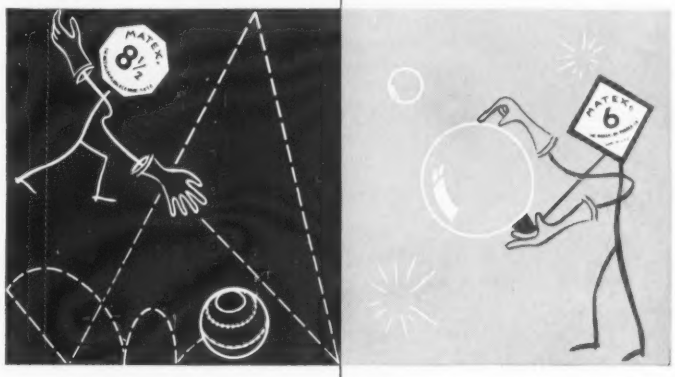

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(Continued from page 77)

which there is a mixture of spongioplasm and hemoglobin. Usually the spongioplasm in these cells is of a greater degree than that found in reticulocytes. The presence of polychromatophilic cells in the smear indicates accelerated regeneration, and usually the reticulocyte count is raised. Reticulocytes are stained with supravital stains to demonstrate the ribosenucleic acid. The polychromatophilic cell will also take up this supravital stain, and it has been shown that there is a greater amount of ribosenucleic acid present in these cells. The noting of this finding is important not only in diagnosis but in following therapy.

The nucleated red blood cell or normoblast, when seen in the peripheral smear, is only normal at the time of birth. If you consider the average approximately three to 10 nucleated red cells/100 white blood cells, any increase at the time of birth indicates accelerated extramedullary hematopoiesis and usually a hemolytic anemia probably due to incompatibilities of the Rh system.

The presence of normoblasts at any other age is abnormal and should always be brought to the attention of the pathologist, since it indicates extra-medullary hematopoiesis and should be investigated. Nucleated red cells cannot leave the marrow. The reason for this is not known. However, in the spleen or other extramedullary sites, where there is an open circulation—that is, areas of hematopoiesis are in contact with the normal circulation—these cells can escape and be found in the peripheral blood. Normoblasts also can be found in the peripheral blood when the reticulocyte count is above 10 percent.

Presence of normochromic normocytic cells usually rules out a chronic blood loss or B_{12} deficiency, but it is important to note this finding, especially in anemias, since it usually indicates marrow insufficiency.

When all these findings of the stained smear are collected and considered together, certain features aid in the diagnosis of various diseases:

(1) The presence of hypochromic macrocytic erythrocytes and nucleated red blood cells usually indicates erythroblastosis in the newborn.

(2) Normochromic normocytic cells may indicate acute hemorrhage.

(3) Hypochromic, microcytic cells are found in chronic hemorrhage and iron deficiency anemias, and poikilocytosis is marked.

(4) Macrocytosis, poikilocytosis, and anisocytosis are seen in pernicious anemia.

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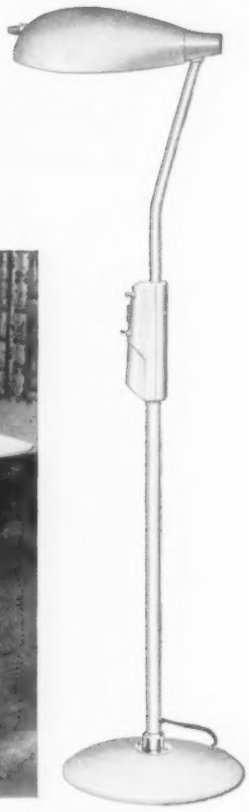

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DIRECTOR OF NURSES: (a) Nurs serv & ed; admin exp & PG admin work req'd; 500 bd gen hosp; $7500 start, incr. to $9000 by 4th yr; lge city; MW. (e) Nurs serv & ed; 1 of finest hosps in So; med sch affil; lovely lge city. (f) Nurs serv & ed; vol gen hosp 160 bds; expan prog just compl; 75 students; to $6000; attrac coll twn nr univ city.

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ADMINISTRATOR: 2 years, ass't dir, 3 years, director, univ hosp, early 30's; Member, ACHA.

ADMINISTRATOR: (Assistant) 28; M.S. (Hosp adm), Western Reserve; 6 mo, admitting clerk, 200 bed hosp; yrs' adm res, 900 bed hosp; trn'g completed; prefers SW or south.

ADMINISTRATOR: (Ass't); 27; B.S., M.H.A., Columbia; year's adm res, 400 bed gen vol hosp; prefers New England, East Coast.

ADMINISTRATOR: (Ass't); B.S., M.A., M.S. (hosp adm), Northwestern; adm res, 700 bed univ hosp; prefers Atlantic Coastal or So.

ANESTHESIOLOGIST: 34; Dipl; M.D., Temple; since 1949, ass't attnd'g anes, large tch'g hosp, unit impor univ med center.

PATHOLOGIST: Dipl (both branches); trained, Cook County, Chgo; 4 years, private pract, apth & assoc path, 2 very large hospitals; prefers directorship, path, in larger hosps in midwest; early 30's.

Personally Speaking

John Abram—has been appointed administrator, Lakewood Hospital, Morgan City, La.

Henry Aloway—has resigned as administrator, Pontotoc (Miss.) Community Hospital to accept a position as manager, Oxford (Miss.) Hospital.

Sister Mary Aquinas—administrator, St. James Mercy Hospital, Hornell, N. Y., recently completed fifty years of service with the hospital. A reception and luncheon were held in her honor and the mayor of Hornell proclaimed a Sister Mary Aquinas day.

Sister Mary Athanasia, S.S.M.—is now administrator, St. Joseph Hospital, St. Charles, Mo. She succeeds **Sister Mary Bernadine** now administrator, St. Francis Hospital, Blue Island, Ill.

Marc D. Atkinson—is the new administrator, Douglas County Hospital, Alexandria, Minn.

Henry Boyd—has been named administrator, Dyer County Hospital, Dyersburg, Tenn.

William Branson—senior resident in hospital administration, St. Luke's Hospital, Chicago, has been promoted to assistant director in Methods Improvement.

Richard Brooke, Jr.—formerly administrator, Gill Memorial Eye, Ear and Throat Hospital, Roanoke, Va., has been named assistant administrator, Riverside Hospital, Jacksonville, Fla.

Alan B. Campbell—has been appointed administrator of the new Richland Memorial Hospital, Olney, Ill.

Benny Carlisle—has resigned as administrator, Washington County Hospital, Fayetteville, Ark. to assume the administration of Oklahoma General Hospital, Clinton, Okla.

O. W. Clinger, M.D.—has resigned as superintendent, Danville (Pa.) State Hospital.

Dortha I. Dorsey, R.N.—has been chosen director of nurses and surgical supervisor, Preston Memorial Hospital, Kingwood, W. Va.

Edward A. Dougherty—has been appointed asisstant executive director, New Jersey Hospital Association.

Sister Barbara Ellen—administrator, St. Peter Hospital, Olympia, Wash., has been transferred to Mount St. Vincent Home for the Aged, Seattle, as superior. **Sister Germaine** succeeds Sister Barbara Ellen.

Mrs. Nellie T. English—has been appointed director of nursing service, Ochsner Foundation Hospital, New Orleans, La.

Robert S. Forhman — formerly assistant administrator, Knickerbocker Hospital, New York City, has been appointed administrator, Liberty Maimonides Hospital, Liberty, N.Y.

Lewis Furlong—recently resigned as administrator, Mercy Hospital, Tulsa, Okla.

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John A. Leam, M.D.—formerly pathologist, Sunbury (Pa.) Community Hospital, has assumed a similar post at St. Clair Memorial Hospital, Mt. Lebanon, Pa.

H. Filmore Mabry—has assumed the duties of administrator, Clarendon Memorial Hospital, Manning, S. C., succeeding **James E. Case**, who has accepted a position at Toumey Hospital, Sumter, S. C.

Mrs. Thelma Magee—has been appointed superintendent of nurses, Jackson Hospital, Marianna, Fla.

Sister Margaret—has been appointed administrator, St. Vincent's Hospital, Bridgeport, Conn. She replaces **Sister Marie** who is taking a prolonged rest.

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PHARMACISTS: (a) Chief. East. 250 bed hospital. $5000. (b) Chief. West. 150 bed hospital, fully approved. $6000. (c) Middle West. 250 bed general hospital in pleasant college town of 50,000. $4800. (d) Chief. East. 250 bed general hospital. Purchase and supervise perpetual inventory of all drugs. $5400. (e) Southwest. University hospital. Pharmacy has been completely remodeled and is modern in all respects. 3 in department. $5000. (f) Assistant. South. 250 bed hospital in city of 75,000. $4200-$5000. (g) Chief. East. 300 bed hospital, fully approved. Located in city of 58,000; two colleges. $550.

PHYSICAL THERAPISTS: (a) Southwest. 125 bed hospital. Experience in handling polio patients. $500. (b) Northwest. 300 bed hospital in city of 250,000; outstanding medical center. $400. (c) California. 250 bed hospital near San Francisco. $415. (d) Middle West. 150 bed hospital. Therapy department has been completely remodeled and is modern in all respects. $500. (e) Southwest. New 100 bed hospital—all latest equipment. Must be registered or eligible. $400 minimum. (f) East. 800 bed hospital. 7 therapists in department. Require varied experience in all therapy. (g) Southwest. 280 bed hospital located in city of 100,000. Excellent educational and recreational activities. $500.

Henry J. McKinley—is now business manager, Weston (W. Va.) State Hospital. Mr. McKinley is a former West Virginia state senator.

Joseph F. McWilliams—has resigned his position as administrator, City-County Hospital, McKinney, Tex., to accept administratorship of Eastern New Mexico Medical Center, Roswell, N. M. He succeeds **Harry Payne** who has accepted a position as administrator, El Paso (N. M.) General Hospital.

Donald T. Miller—formerly chief pharmacist, Duke University Hospital, Durham, Ga., has been named chief pharmacist, Memorial Hospital of Chatham County, Savannah, Ga.

Terry B. Nichols—has been appointed director of pharmaceutical services, Memorial Hospital Association of Kentucky. The association is establishing a network of ten hospitals in the coal fields of Kentucky, West Virginia and Virginia. Mr. Nichols formerly was chief, pharmacy service, VA hospital, Birmingham, Ala.

H. Frazer Parry, M.D.—was recently named director, Magee Memorial Hospital, Philadelphia, Pa.

James Russell Pepper—was recently appointed administrator, Newcomb Hospital, Vineland, N. J., succeeding **Philip Walsh** who resigned.

Leo G. Rigler, M.D.—has been appointed director of post-graduate medical education, and chief of diagnostic roentgenology, City of Hope Medical Center, Los Angeles, Calif.

Clifford F. Schwarberg — formerly assistant administrator, University Hospital, Ohio State University Health Center, Columbus, O., is now administrator, Presbyterian Intercommunity Hospital, Whittier, Calif.

Theodore B. Schwartz, M.D.—has been appointed chief, endocrinology and metabolic diseases division, department of medicine, Presbyterian Hospital, Chicago.

David V. Shaw—has been appointed assistant director, Southside Hospital, Bay Shore, N. Y. Mr. Shaw served his administrative residency at Lowell (Mass.) General Hospital.

Henry J. Sweets, Jr.—has been named pathologist for St. Elizabeth and Levering hospitals, Hannibal, Mo.

Sister Mary Thaddaea—is now administrator, St. Mary's of the Ozarks Hospital, Ironton, Mo.

Sister M. Theophane—has been named executive administrator, St. Joseph's Hospital, Lorain, O. She succeeds **Sister M. Baptista** who has been named assistant administrator, St. Elizabeth's Hospital, Youngstown, O.

Kathryn Vinton, R.N.—has been named superintendent of nurses, Ogallala (Nebr.) Community Hospital.

Harold Warren—has been named administrator, Elizabethtown (Ky.) General Hospital. He formerly was administrator, Central Baptist Hospital, Lexington, Ky.

Robert G. West—has been appointed administrator, W. A. Foote Memorial Hospital, Jackson, Mich.

Louise R. Whaley—has been confirmed as executive housekeeper, Humboldt County Community Hospital, Eureka, Calif.

Brig. Gen. William L. Wilson—has assumed command, Madigan Army Hospital, Tacoma, Wash. He succeeds **Brig. Gen. Paul I. Robinson.**

(Continued on page 83)

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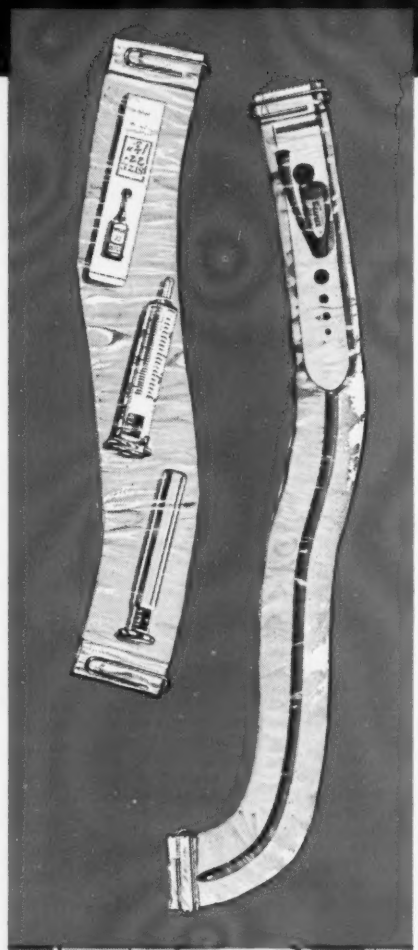

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(Continued from page 81)

VA Nursing Appointments

Alberta Adams, R.N.—has been appointed assistant chief, nursing service, Muskegee, Okla. VA hospital. Prior to transfer she held a similar position in Excelsior Springs, Mo.

John F. Adams, R.N.—formerly an instructor at Hines, Ill., VA hospital, has been assigned assistant chief, nursing education, Iowa City VA hospital.

Blessing Beasley, R.N.—has been named chief, nursing service, Danville, Ill. VA hospital, and **Charles Davis, R.N.**, assistant chief, nursing education, there.

Albina Bennett, R.N.—is now assistant chief, nursing education, Indianapolis, Ind. VA hospital.

Geneva Book, R.N.—has been assigned assistant chief, nursing service and education, Poplar Bluff, Mo. VA hospital. She was formerly assistant chief, nursing education.

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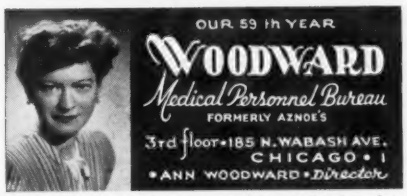

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SUPERVISORS: (b) OR; sm gen hosp, JCAH apprv'd; $4500; attrac sm twn; SW. (c) OR; active surg serv; 6-rm suite; staff of 15 in add'n to stud; 300 bd gen hosp; excel pers pol; twn 50,000; N. England. (d) OR; pref w/pg trng; JCAH vol gen hosp 100 bds; $4800; attrac twn 15,000; Pac NW. (f) OR; 300 bd gen hosp just compl; air-cond; top quals req'd; attrac offer; lge city; SE. (h) OR; very lge univ hosp; affil impor med sch; lge city; So.

Mary Clark, R.N.—is assistant chief, nursing service, Washington, D.C. VA hospital. **Eileen Jones, R.N.**, has been appointed assistant chief, nursing education, at the hospital.

June Cramer, R.N.—has been named assistant chief, nursing education, San Fernando, Calif. VA hospital, where she was formerly an instructor.

Mary Fox, R.N.—is chief, nursing service, Dayton, O. VA hospital.

Berta Galloway, R.N.—formerly instructor, Tuskegee, Ala. VA hospital, has been assigned assistant chief, nursing education, at the hospital.

William Hartnett, R.N.—is now chief, nursing service, Pittsburgh, Pa. General Medical and Surgical hospital. He was formerly chief, nursing service, Aspinwall, Pa. VA hospital.

Mary S. Harper, R.N.—is assistant chief, nursing education, Battle Creek, Mich. VA hospital. Prior to transfer she held a similar position at Tuskegee, Ala.

Lucie Hutchison, R.N.—has been assigned assistant chief, nursing service, Chillicothe, O. VA hospital, where she was formerly a supervisor.

Edward Kruk, R.N.—has been named assistant chief, nursing service, Tomah, Wis. VA hospital.

Rita McGowan, R.N.—has been assigned assistant chief, nursing service. Bedford, Mass. VA hospital.

Deaths

Frank P. Auld, M.D.—80, practicing physician for over 50 years in Shelbyville, Ill., died July 16. He was instrumental in securing the first hospital for Shelbyville.

Edmund Williams Butler, M.D.—68, chief of surgical division, St. Mary's Hospital, San Francisco, Calif., and head, San Francisco Emergency Hospital Service, died July 31.

David Cheever, M.D.—79, associate professor of surgery emeritus, Harvard Medical School, and former president, American Surgical Association, died August 13.

SUPERVISOR—Operating room nurse; wanted immediately for new surgical unit, 400-bed chest hospital, located outside of Buffalo, New York; maintenance available; state salary desired. Liberal vacation and sick leave; State pension system. Apply director N. N. Adam Memorial Hospital, Perrysburg, N. Y.

Isaac Greenwood Duncan, M.D.—70, leading Memphis physician for 40 years, and former urology professor, University of Tennessee Medical Units, died July 24.

N. Arthur Fischer, M.D.—69, ear, nose and throat specialist, died July 28. He was a past president of the staff of St. Francis Hospital, Pittsburgh, Pa., and professor emeritus of clinical otology, University of Pittsburgh.

Leonard M. Freda, M.D.—59, former superintendent, Scranton (Pa.) State Hospital, and former county commissioner, died July 15.

Charles J. Hassenauer—60, administrator, Garfield Park Community Hospital, Chicago, and past president of the Chicago Hospital Council, died July 9.

Jacob Mendelsohn, M.D.—64, specialist in tuberculosis, and chest diseases died July 26. He had been resident director of Fox River Sanitarium, Batavia, Ill. since 1914, and was attending physician at Weiss, and Columbia Memorial Hospital, Chicago.

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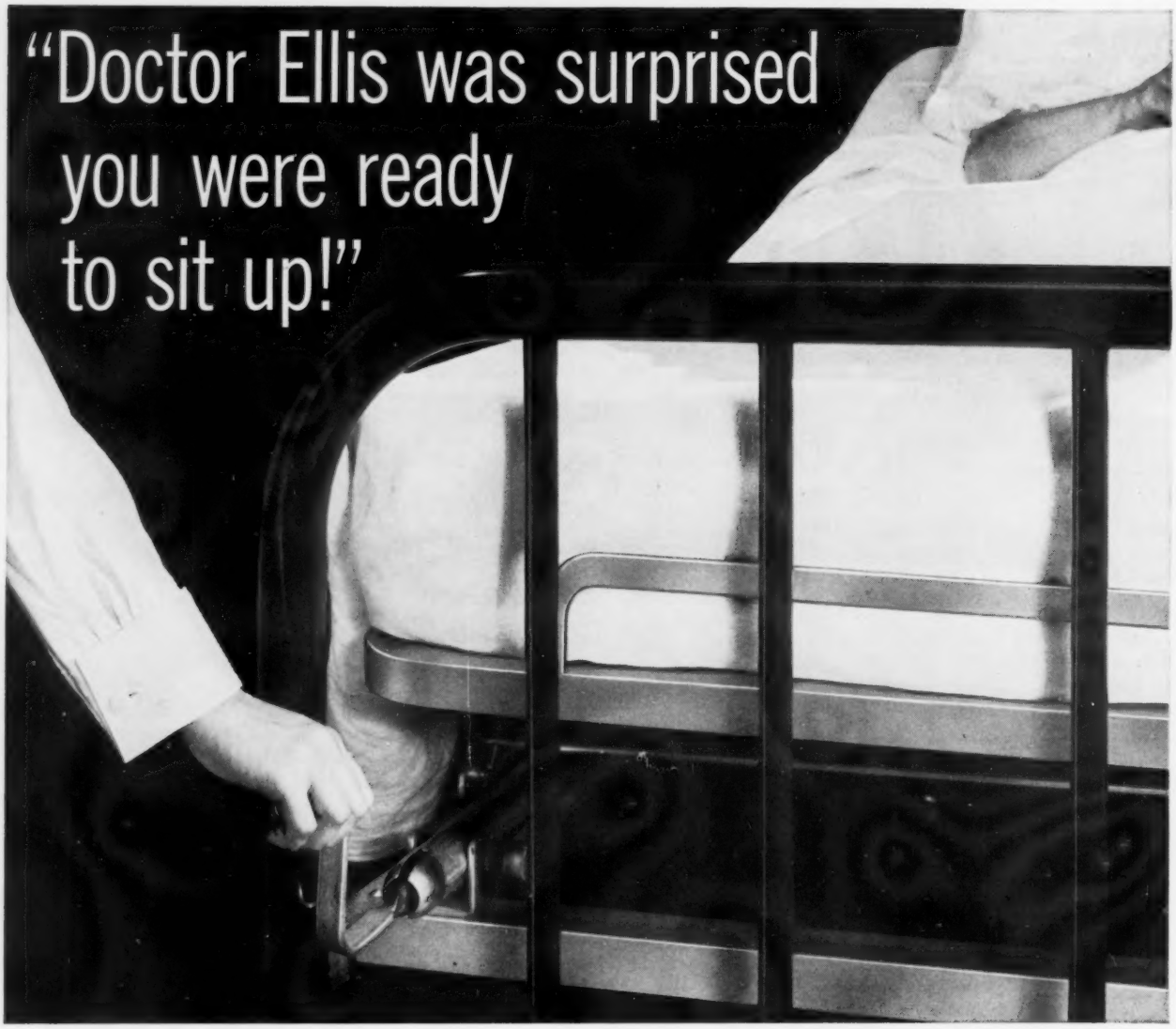

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Pittsburgh A.O.R.N. Hold Annual Banquet

• Members of the Pittsburgh Association of Operating Room Nurses are shown above at their sixth annual banquet. Front row (l. to r.): Finis Barr, Barbara Gangawere, Frances Wierzchowski, Harrison Elleard, Gertrude Lindner, Catherine Fairley, Margaret Hartle, Florence Greineiser, Elizabeth Hanlon, Mary Staub, Melinda LeDuc, and Mary Barbero. Back row (l. to r.): Loretta McFerron, Lois Armstrong, Mary J. Bogan, Lillian Hankins, Jean Rearich, Freda Knestaut, Mary Battaglino, Loretta Kokaszka, Gloria Tait, Audrey Spence, Louise Lichtenfels, Virginia Rambo, Ruth Lichtie, Ruth Mall, Margaret Gilday, Louise Allayaud, Margie Phillips, Mildred Hallaman, Marilyn Nicholson, Emily Cochlin, and Joanne Mounts.

Officers for 1955-56 are Margaret Hartle, operating room supervisor, Homestead Hospital, president; Gertrude Lindner, assistant operating room supervisor, VA Hospital, vice-president; Florence Greineiser, assistant operating room supervisor, Children's Hospital, secretary; Virginia Rambo, South Side Hospital, treasurer; and Blanche Ivory, operating room supervisor, VA Hospital, Catherine Marburger, operating room supervisor, Presbyterian Hospital, and Catherine Fairley, operating room supervisor, Allegheny General Hospital, directors.

Explosion Hazards

By Richard H. Barrett, M.D.

● I have been present at one explosion and two fires that have taken place in the operating room. These occurred either during or before my internship. Why I should have elected to go into anesthesiology after these experiences, I have never quite decided.

The explosion and the two fires were the result of a fairly well-established fact—that is, that ether will burn if ignited, or even explode, if given a little support with oxygen. It's as simple as that. It was then, it is today, and it will be tomorrow. Most fires and explosions don't "just happen." People cause them, either directly or indirectly.

I have heard it said: "Why get all excited about the possibility of an explosion or a fire? How often does it happen, anyway, in the operating room?"

The answer to this is rather obvious: It happens usually only *once* to you or to some patient, and that is just once too often. Some of us have been lucky.

Let me quote from a letter received from an operating room supervisor who used to be in our hospital and is now employed in a large midwestern university hospital:

"I'm still shaking from the experience we had at work today. The thing that every O.R. dreads happened. A gas machine exploded. I was circulating in one room and had just gone to look out the window because it had started to snow when we heard this terrific blast. Couldn't imagine what it was until someone started to scream—so then I took off to find out what was going on. It was in the room across from mine, and I didn't quite know what we would find in the room.

"Luckily no one was killed, but the anesthetist has second-degree burns on her arms and legs and lost quite a bit of hair. The explosion was in the gas bag itself, but I don't think any of the flames went into the patient's lungs. They did a bronchoscopy on him soon after, but his trauma they think was caused from the pressure in the tubes rather than any flames. He has a lot of pulmonary edema, so they left the IT tube in and kept him asleep with a Pento drip.

"This all happened about 8:30 this morning, and he was still in the O.R. when we came off this p.m.

"B. J. was circulating for the case, and I guess it just about scared her to death. She was right near the machine, and it was about three hours before her hearing came back. Guess she and the rest who were in the room all will have hearing tests within the next week. That explosion was something I never hoped to hear or see, but now that I have, I hope never to see another one. We don't know the cause, but it will probably be blamed on cautery with GOE.

"I think everyone has learned a lesson from the experience, though. The patient is a bigwig lawyer, so it will be interesting to find out how this will all turn out. What a day! I thought for a while everyone was 'sent for.'"[1]

This girl now knows what I have been talking about for the past 10 or 15 years. Actually, this type of accident happens once in approximately every 80,000 to 100,000 anesthesias.[2]

Why did this accident happen? The surgeon used an electric cautery in the mouth while the patient was receiving a flammable anesthetic.

How is the patient doing? Fortunately, all right. He happened to be breathing out at the time. There was, however, a 50-50 chance that he might have been breathing in.

I cannot possibly describe in detail all of the potential dangers to be encountered in an operating room, and I refer specifically to those hazards and dangers quite aside from any inherent in certain types of surgery, poorly administered anesthesia, or the possibility of wound infection.

Anything I may tell you is something we all have heard before. It is like telling children to "shut the door" when coming into the house in subzero weather. It is not that they haven't been told before. We are all guilty of being "children" at times, but the present subject is of life-or-death importance.

I frequently tell our nurses and other hospital personnel that I don't care if there are shavings and mud —nice, wet mud—on the floors in the operating room, but make sure that the side walls and ceilings are clean. We in anesthesia must learn to live in the horizontal—and I don't mean lying down—but we must see things as the patient sees them, and that is usually from the horizontal or supine position. Of course, cleanliness in our operating rooms is of paramount importance, but I trust you understand what I mean.

STATIC ELECTRICITY

You notice I say "nice, wet mud." This brings us to the conductivity of electricity in the operating room. Generally speaking, the type of electricity we fear most is that known as static electricity.

Static electricity is electricity at rest. This form of electricity is the cause of a high percentage of explosions in hospitals. It is usually produced on nonconductors, but it can be transferred and retained on insulated conductors.

Friction between dissimilar, nonconductive materials produces static charges. Some examples of this are the shuffling of feet across a rug on a cold, dry day, running a comb through the hair, rubbing a glass rod with silk or synthetic fabric, and separating blankets or unfolding them. Static charges can be generated by frictional contact and separation of woolen garments, upholstered furniture, and so forth. Did you ever slide out of your automobile on a cold winter's day and be assisted in your departure by a sharp jab behind you as your feet neared the ground? I have seen people look for a pin in the cushion on such occasions. *That* is static electricity asserting itself.

Most materials permit electricity to pass through them, but some materials are such poor conductors that they are considered insulators. Metals and carbon are

in the Operating Room

good conductors, whereas acids, salt solutions, plants, and animals are relatively poor conductors. Various oils, dry wood, silk, rubber, plastics, glass, and air are considered insulators.

Development of electrostatic charges in the average room is impossible to prevent. There is so much activity that frequently frictional contact occurs with one or another of the many nonconductive materials that are present in the room, and charges are thus generated.

The only way to prevent the accumulation of static charges thus produced is to provide paths by which the electrostatic charges may flow away as fast as they are generated. This can be done through the use of conductive floors and efficient conductive contact thereto. All movable conductive objects and personnel present in a room in which flammable anesthetic agents are administered should have proper electrical contact with the floors.

To put it even more plainly, static electricity is that form of electricity which one sees, or hears, when one strokes a cat's fur.

Incidentally, a short while ago a graduate fellow in physical science figured out how many strokes of a cat's back it would take to light a 50-watt electric light bulb for one hour. The figure was approximately 1,763,550,625 strokes. The danger of electrocution from this indoor pastime is not to be feared—but the amount of electricity generated by just one or two strokes of a cat is sufficient to cause a death-dealing explosion under proper circumstances—also, I suppose it might depend on the kind of cat!

It is true that we do not have cats (in the true sense of the word) in operating rooms; however, there are some operating rooms that I have visited in which their presence would not seem at all out-of-place.

Although it would be a little far-fetched to imagine seeing cat fur in the operating room, we do see other items which are just as capable of producing static electricity, such as lamb's wool, nonconductive gum-rubber-soled shoes, dry leather-soled shoes, wool blankets, rayon and nylon uniforms and stockings, or sharkskin uniforms, cotton blankets now containing nylon or rayon, nonconductive rubber-covered pads on operating tables and anesthetists' stools, and several other things equally out-of-place in the modern operating room.

Some nurses rebel at wearing unironed, or even ironed, cotton scrub dresses, and cotton stockings seem to be especially taboo among nursing personnel. Actually, it would be much safer for all concerned, at least from the explosion standpoint, if *all* O.R. personnel wore *no* stockings *at all*. They are not worn out-of-doors. Why put them on in the operating room? At one time it was decreed that nothing but cotton clothing throughout should be worn in the O.R., but now it is accepted fairly generally that nylon or other synthetic undergarments may be worn if the whole garment is in contact with the skin. The bodice of a slip qualifies; the free-hanging skirt is hazardous.

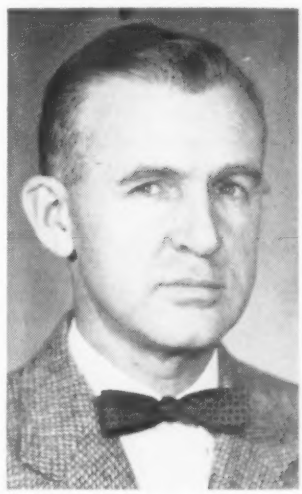
Schiaparelli, Claire McCardell, Dior, and other designers have not, as yet, invaded the panorama of the operating room, and it is doubtful that they ever will. Glamor is out-of-place in the O.R.—the moving-picture industry to the contrary. There is another much more important reason for the existence of this room which is found in nearly every hospital. Remember? It is a place in which patients receive the best surgery available in the safest possible manner.

Please do not think for a minute that I am blaming or pointing my finger at the permanent operating room personnel, for I am well aware of the fact that many surgeons are directly responsible for hazardous conditions which exist in some operating rooms, and the anesthesiologists are equally responsible for letting them get away with it.

In those hospitals in which there is no anesthesiologist, it is the responsibility of the physician anesthetist or the anesthesia nurse to be on guard against hazardous conditions that might result in fires or explosions. This may not put these persons in a position to make friends, but they can influence people, and any idea of taking part in a popularity contest should be discarded. Next to the patient, the person who administers anesthesia holds the most dangerous position in the operating room. He or she is the guardian of the welfare of *everyone* who *is* in or *who may enter* this room. If for no reason other than the very selfish one, he should be governed by that basic instinct of self-preservation.

Internists, pathologists, medical students, and others have a way of drifting into operating rooms to observe unusual, or usual, operations or pathological specimens. These persons simply do not know the potential danger which is created for themselves and for those about them by these occasional visits. They must be told! An internist wearing wool trousers and other nonac-

(Continued on next page)



The author is an anesthesiologist at the Hitchcock Clinic, Hanover, N.H. His paper was originally presented before an instructional conference at the New England Hospital Assembly.

ceptable attire—even if he is the chief of staff—who enters the operating room during the administration of flammable anesthetics may serve as an A-1 detonator. He must be told in proper but certain terms that in this condition he is a menace. Diplomacy should, of course, be used at all times, but if this is unsuccessful, you are fully justified to use any readily understandable language—even operating room dialect if necessary.

Under most circumstances there will be no difficulty with these wandering creators of static electricity, but in even the best-known and best-run institutions there are apt to be a few prima donnas who will bear watching and warning. Remember it is your life and that of the patient that may be at stake, and act accordingly.

Conductive casters and conductive-soled shoes are useful for removing static electricity from operating room equipment and personnel, respectively, only if the floor is definitely conductive. I have visited institutions in which all the "rolling stock"—that is, tables, stands, intravenous poles, etc.—had conductive rubber casters and also properly adjusted drag chains—but on a completely nonconductive floor! There might have been some excuse for this if there had been even contemplation of the installation of the conductive floor, but such was not the case.

In contradistinction to this situation, I visited a hospital not long ago in which the operating team, operating table and other furniture, including the anesthesia equipment, and the anesthesia personnel all stood on a solid steel plate which in turn was attached to a steam pipe! All I could think of was what would happen if there were a short circuit in the operating light above the table and someone standing on this plate—which was kept moist—should reach up to adjust the light. Fricassee of O.R. personnel! Why it is that some people try so hard just to really get into trouble?

Much effort has been expended in trying to find an acceptable operating room floor. I would like to tell you what George J. Thomas, M.D., of the St. Francis Hospital, Pittsburgh, has to say on this and some other subjects.[3] Dr. Thomas has had wide experience in preventing operating room hazards and fortunately has been in a position to be in close association with the Mine Safety group in and near Pittsburgh.

FLOORS

"Since 1940 we have been interested in finding an ideal conductive flooring material for anesthetizing areas in hospitals. We have been searching for a floor that has appearance, wear, ease of cleaning, and special function of neutralization of electrostatic charges. Because of the nature of the material used in that type of structure, any conductive, resilient, or shock-absorbing floor is necessarily softer than the ordinary vitreous ceramic tile or cement installations, and is subject to indentation and other types of marring. Up until June, 1952, discouraging results were obtained. Many of the conductive flooring materials lost their conductivity after one to five years of hospital maintenance and use. Few of the cement terrazzo type of floors had to be replaced because the matrix loosened with each mopping.

"Of the several flooring materials studied, three can be recommended on the basis of their performance. One is the conductive Vinylast, manufactured by the Vinyl Plastic Co., of Sheboygan, Wis. This vinyl plastic tile, measuring 9" square and ⅛" thick, is a tough floor covering that is cemented through a copper wire screen to any existing floor. It is resilient and easy on the feet and meets the present code requirements. It is furnished in mottlings of green and light gray colors. This material is recommended for existing hospitals because it can be installed without interrupting the surgical schedule. Additional information on the conductive Vinylast may be obtained from the Vinyl Plastic Co., Sheboygan, Wis.

"The second type: For new constructions, however, I believe that the vitreous ceramic tile flooring material, which also meets the present-day code requirements, is more durable. The small tiles are ¼" thick and require a 1" conductive underbed. At present this material is available in black and green tile combinations. To install these tiles the room must be vacated from seven to 10 days. Additional information may be obtained from the Olean Tile Co., Olean, N. Y.

"The third type is the carbon black floor installed in accordance with the specifications made by the Bureau of Standards and the Shawinigan Chemical Co., Shawinigan (Que.), Canada. (The latter is the manufacturer of the acetylene black used in the floor.) Our study of the carbon black floor installed in some of the hospitals shows fine hair-like cracks which are typical of all types of terrazzo floors. Some of these show high electric resistance four to five years after their installation. However, many have retained satisfactory electric conductivity.

"Because some of the carbon black floors show high electric resistance, I personally feel that metal dividing strips should be used in place of the nonmetallic type which are recommended by some authorities. Protection to personnel against power shock may be given through isolation transformers that should be part of all operating and delivery rooms in hospitals.

"A floor that meets the present-day requirements should have 25,000 ohms for the lower limits and 1,000,000 ohms for the upper limits. A happy medium is 250,000 ohms, which will protect personnel against power shock."

SHOES

Conductive-soled shoes are to be preferred. However, in the absence of such footwear you can use conductive stick-ons, slip-ons, or booties. The places at which you can obtain these are named in the accompanying lists.

Stocking feet are safe, but watch out for broken glass ampules!

So-called "conductive shoes" are not conductive if they are covered with the usual types of institutional floor wax. The soles of these shoes should be cleaned at regular intervals. That means daily. There are many detergents at the corner grocery store which can perform this task.

The only practical way of finding out whether shoes are conductive is to test them on an insulation tester. The shoe tester made by the Conductive Research Associates is satisfactory for testing shoes, but it cannot be used for testing floors. I prefer equipment that gives reading in ohms for footwear and other items. A combination of floor tester and shoe tester which has been found satisfactory is manufactured and sold by the Conductive Hospital Accessories Corp. in Boston.

FLOOR WAX

Many hospital administrators and housekeepers dislike the appearance of the average operating room floor.

If the floors are made of recommended conductive

material, they very definitely should *not* be waxed, unless a conductive type of wax is used. Be sure it is conductive before purchasing it.

A mild, non-greasy detergent can be used for cleaning. Washing floors aids the conductivity. Treat the clear wash water with calcium chloride one percent solution to provide a deep conductive layer. Consult conductive flooring manufacturers regarding cleaning. They will give exact directions.

GROUNDING

If there is a question of proper grounding in the operating room due to high resistance of the floor, I would suggest the use of three wet towels or any other sizeable pieces of fabric.

The first towel is folded lengthwise; one end is placed under the patient's shoulder, against the bare skin, and the other end is tucked between the mattress and the top of the operating table.

A second wet towel is laid above the caster from the base of the operating table to the floor toward the anesthetist's foot.

The remaining wet towel is stretched from the foot of the gas machine to the floor. The anesthetist's foot and the stool touch one or both of the towels. Wet towels employed in such a manner provide excellent interconnection and grounding, even though a standard test may indicate high floor resistance.

Conduction of electricity to ground through a floor is accomplished through many paths of high resistance. When a contact to the floor is made with a chair, plate, or chain, only a few of the available paths to ground are used. When contact is made through a large, wet towel, cloth, or pool of water placed on the floor, thousands of such paths are made available, and the neutralization of charges is accomplished easily.

BLANKETS

For many years we have thought we were fairly safe as far as blankets and sheets were concerned. Of course we have condemned woolen blankets but have accepted cotton blankets. Now the manufacturers have fouled us up again. Synthetic fibers (dacron, nylon, etc.) are being put in so-called "cotton" blankets. They create one more source of static electricity. Incidentally, there is another time-worn custom which also may get some of us into trouble. That is the practice of warming cotton blankets for use in the operating room. When cotton blankets or sheets are not warmed—that is, they are left at room temperature—there is apt to be a slight degree of moisture retained in the material. This aids in the electrical conductivity and cuts down on the possibility of static sparks. Warming removes this moisture—and from the purely physiological standpoint a superwarmed blanket may be more harmful to a patient under anesthesia than one at room temperature.

There is a new little bulletin[4] which is published by the York Research Publishing Co., Inc., of Stamford, Conn., which I would like to recommend. This is what that company says of the bulletin: "A confidential monthly service to managers, purchasing agents, and housekeepers direct from the laboratory which specializes in the institutional field."

In Vol. I of this bulletin the following report appears:

"With the growing use of synthetic fibers (dacron, nylon, etc.) in blankets, pillows, and even sheets, many institutions have been confronted with the problem of static electricity.

"Our laboratory has made tests on an antistatic product called 'Negastat.' When used as directed, 'Negastat' prevents any build-up of static electricity, for extended periods. Further, this product does not change the appearance of the fabrics tested.

Static Resistance

"A Gardner washability machine was used in this test. A three-pound load was placed on the abrasion boat and heavy black wool was used as the rubbing medium.

"A control sample of untreated plastic fabric was rubbed, and after five cycles (10 strokes) a static charge of 1.5KV/ft. was built up.

"A similar sample of plastic fabric was first sprayed with 'Negastat 105' and then exposed to the abrasion machine. The wool was used in order to create the static charge and was changed every 50 cycles to eliminate the possibility of 'Negastat' building up on the wool.

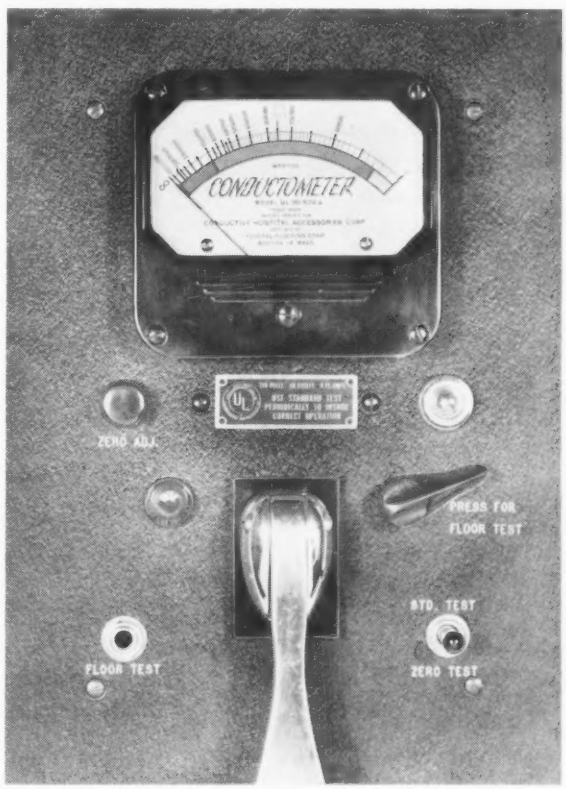
"After 3,500 cycles (7,000 strokes) there was no measurable static charge on a Baldwin-Dunlap Statigun.

" 'Negastat' comes in two forms: Pressurized for spraying on rugs and upholstery and in a solution to be used in the final rinse in laundering of bedding, uniforms, etc.

"While the antistatic qualities of 'Negastat' remain effective for a considerable length of time, 'Negastat' is removed in the laundering process and must be reapplied in the final rinse.

(Continued on next page)

Conductometer (below), made by Conductive Hospital Accessories Corp., is designed for testing electrical resistance of operating room personnel, flooring, and equipment. It is flush mounted in the wall five feet above the floor, just inside the operating room entrance.



" 'Negastat' is manufactured by Phillips and Phillips Corp., 343 S. Dearborn St., Chicago 4, Ill."

HUMIDITY

We would be negligent if we did not say a few words concerning humidity—the relative amount of moisture in the air.

It has been a common belief among many anesthetists that an atmosphere of high humidity prevents accumulation of static electricity and thereby eliminates explosions caused by electrostatic charges. However, several explosions have been reported with the relative humidity at 65 percent. In 1949 an explosion attributed to a static spark occurred when the relative humidity was 76 percent.[2]

Air-conditioned operating rooms are desirable, but some authorities are of the opinion that artificially conditioned operating rooms are more dangerous than nonconditioned rooms, because of the removal of carbon dioxide from the air. These individuals believe that it is the carbon dioxide in the humid atmosphere which is effective in giving conductivity to insulators.

While this seems plausible, it is not altogether true, because most chargeable surfaces and insulators in operating rooms are contaminated with dust, soap films, and so on, which probably furnish more ions in solution than would be furnished by the carbon dioxide. Unless the relative humidity is high, it may not prevent the possible electrification of rubber parts. Furthermore, unless the equipment is in constant operation and in permanently good condition, it may fail to provide protection when it is most needed.

SAFE PRACTICE FOR CYLINDERS WITH COMPRESSED GASES

The Division of Simplified Practices of the National Bureau of Standards,[5] Washington, D.C., has recommended the following color markings for the gases concerned:

Oxygen—green

Carbon dioxide—gray

Nitrous oxide—light blue

Cyclopropane—orange

Helium—brown

Ethylene—red

Carbon dioxide and oxygen—gray and green

Helium and oxygen—brown and green

HANDLING GAS TANKS USED IN ANESTHESIA

We have all seen the occasional oxygen tank, especially the big "G" or "H" size, on which the cap covering the valve, or the valve itself, sticks or squeaks. Now an up-and-coming young maintenance man or even an old sage in that department may get into considerable difficulty, even lose his life, if he gets busy with his oil can on this squeaking valve or valve cover. *Do not* permit oil, grease, or flammable liquid to come in contact with oxygen cylinders, valves, regulator gauges, or fittings. Oils and greases in general are lightly oxidizable substances, and we all know that oxygen will support combustion.

Never oil or grease any anesthesia equipment unless a lubricant made for that express purpose is used.

Some other "do's and don'ts" connected with the handling of oxygen are on one of the accompanying lists.

In addition to the standard labeling and coloring of anesthesia gas tanks, we now have also the "pin-index" method for the proper attaching of anesthetic gases to gas machines. If you who are in anesthesia do not know about the "pin-index," ask your gas manufacturer —or, better yet, the manufacturer of your gas machine.

This safe practice, combined with the standard method of labeling all gases used in a hospital, will do much to cut down the possible hazard of connecting the wrong gas to the anesthesia machine.

MISCELLANEOUS

Never cover an anesthesia machine with a sheet or anything else. Removal of the sheet may cause static electricity, with explosion or fire resulting.

The cleaning of the patient's skin in preparation for surgery with ether and alcohol or any other flammable agents is dangerous practice. Not only may fire result from this practice, but also the patient may be burned by ether running down under him.

Obtain as much of the suggested reference material as possible— and read it. Try to make the necessary corrections in your present operating rooms. This is the only way we can make our operating rooms more nearly safe for our trusting public.

Remember: We can have an absolutely safe, if not practical, operating room, providing none us ever goes into it!

REFERENCES

1. A surgical nurse: Personal communication.

2. Thomas, George J., M.D., "Fire and Explosion Hazards in Hospitals," *Journal-Lancet*, Vol. 74, No. 10, p. 415, October, 1954.

3. Thomas, George J., M.D.: Personal communication.

4. York Research Bulletin, Vol. I, No. 1, January, 1955 (York Research Publishing Co., Inc., Research Dr., Stamford, Conn.).

5. "Recommended Safe Practice for Hospital Operating Rooms," National Fire Prevention Association Bulletin No. 56, May, 1954.

CONDUCTIVE MATERIALS OR AGENTS

● The following list of commercial firms is presented expressly as an aid in locating a source of supply of electrically conductive material. This list is, admittedly, grossly incomplete, insofar as indicating the number of places from which these materials may be purchased.

The listing here of a company, or other source of supply, does not necessarily imply that the products of that company (or other source of supply) are superior in any way to those products of many other sources of supply. Nor does the listing here of certain sources of supply imply, necessarily, that they are recommended by the author or by HOSPITAL TOPICS.

Conductive Rubber Parts for Anesthesia Machines

Ohio Chemical and Surgical Equipment Co.
1400 E. Washington Ave.
Madison 10, Wis.

H. E. Richards Co.
411 W. Bancroft St.
Toledo 2, O.

Gallaher, Inc.
4780 Warner Rd.
Cleveland 25, O.

Conductive Rubber Sheeting

American Hospital Supply Corp.
2020 Ridge Ave.
Evanston, Ill.

(Continued on page 92)

Things to Remember*

1. Avoid wool, silk, nylon, sharkskin, nonconductive rubber, plastics, and so forth, in anesthetizing locations.
2. Keep away from the anesthetist and his equipment when using flammable anesthetic agents.
3. Use extreme caution in moving anesthetic appliances.
4. Exercise caution in connecting and disconnecting masks, breathing bags, or tubes, because handling may produce electrostatic charges.
5. Conductive-soled shoes should be worn by hospital personnel.
6. Conductive floors should be installed in all anesthetizing locations.
7. All equipment on the floor should make proper electrical contact with the floor.
8. Paper wrappings should be removed before placing gas cylinders in service so that the cylinder labels may be clearly visible.
9. Purchase anesthetic gases from manufacturers who dispense their products in cylinders that are labeled and colored according to the recommended safe practice of the Bureau of Standards, Washington, D.C.
10. Do not permit oil, grease, or flammable liquids to come in contact with oxygen cylinders, valves, regulator gauges, or fittings.
11. Do not lubricate regulators, fittings, or gauges with oil or any other combustible substance.
12. Always clear the particles of dust and dirt from the outlet of each cylinder by slightly opening and closing the valve before applying any fitting to the cylinder.
13. Do not permit oxygen to enter the regulator suddenly. Open the valve slowly. When opening the valve, point the face of the regulator gauge away from the operator and other personnel.
14. Do not use oxygen fittings, valves, regulators, or gauges for any service except oxygen.
15. Gases should never be mixed in or added to an oxygen cylinder or any other cylinder by hospital personnel.
16. Do not attempt to use regulators that are in need of repair, or cylinders having valves that do not operate properly.
17. Do not attempt to repair defective oxygen equipment unless properly trained and qualified for such work.
18. Cylinder valves should be fully opened when in use.
19. Cylinder valves should be closed at all times except when gas is actually being used.
20. Employ block anesthesia or spinal analgesia or produce anesthesia with nonvolatile agents when these are suitable.
21. Use the carbon dioxide absorption technic in the administration of inhalation agents. The anesthetist should carefully observe the following routine: (a) Touch the patient and the gas machine before releasing any vapors or gases. (b) Bring the mask in contact with the face after it has been connected with the apparatus. (c) Allow only a nonflammable mixture to flow until all contacts are made. A low oxygen concentration might be used for the first half minute of the induction period. (d) Use deliberation in all movements. Break and remake connections of the mask with the patient and of parts of the breathing apparatus only when each part is in your own hands.

Finally, always be on the alert against that silent, unseen hazard that is the least understood and most neglected—"static or frictional electricity." A spark that can scarcely be seen or felt can prove disastrous.

*Most of this list was compiled by George J. Thomas, M.D., for the *News Letter* of the American Society of Anesthesiologists, No. 12 14:14-15, 1950.

RECOMMENDED READING

"Recommended Safe Practice for Hospital Operating Rooms"

May be obtained for 25 cents from:

National Fire Protection Association
60 Batterymarch St.
Boston 10, Mass.

"Static Electricity in Hospital Operating Suites: Direct and Related Hazards and Pertinent Remedies"

Bureau of Mines Report of Investigations 4833
United States Department of Interior, January, 1952

"Safe Practice for Hospital Operating Rooms"

Bulletin No. TB 10A-330
Veterans Administration
Washington 25, D.C.

Surgical Equipment Journal—Special Safety Issue, July, 1951

Ohio Chemical and Surgical Equipment Co.
1400 E. Washington Ave.
Madison 10, Wis.

Conductive Rubber-Sole Shoes

American Hospital Supply Corp.
2020 Ridge Ave.
Evanston, Ill.

Conductive Slip-ons and Stick-ons for Shoes

Conductive Shoe Co.
P.O. Box 437
West Hartford, Conn.

Conductive Booties

Walter G. Legge Co.
Architects' Building
101 Park Ave.
New York 17, N. Y.

Insulation Testers

Conductive Hospital Accessories Corp.
82 W. Dedham St.
Boston 18, Mass.

Herman H. Sticht Co., Inc.
New York, N. Y.

Conductive Research Associates
29 Foxridge Rd.
West Hartford, Conn.

Conductive Flooring

Vinyl Plastic Flooring

Vinyl Plastic Co.
Sheboygan, Wis.
("Vinylast")

Robbins Floor Products, Inc.
Tuscumbia (Muscle Shoals), Ala.
(Lifetime vinyl all-purpose static-proof tile)

Vitreous Ceramic Tile

Olean Tile Co.
Olean, N. Y.

Terrazzo (with large or small marble chips)

Federal Flooring Corp.
82 W. Dedham St.
Boston 18, Mass.

Shawinigan Chemical Co.
Shawinigan, Que., Canada

Conductive Coating for Floors

Example: "Conducote"

Walter G. Legge Co., Inc.
Architects' Building
101 Park Ave.
New York 17, N. Y.

Floor Maintenance—Cleaning and Polishing

"Leco" Safety Floor Polish
"Texinal" Cleaning Compound

Walter G. Legge Co., Inc.
Architects' Building
101 Park Ave.
New York 17, N. Y.

Conductive Solution for Blanket Care

"Negastat"

Phillips and Phillips Corp.
343 S. Dearborn St.
Chicago 4, Ill.

Question Box

Each month questions pertaining to O. R. problems and technics will be answered by Dr. Carl W. Walter, nationally known for his operating room technic courses and as the author of "Aseptic Treatment of Wounds" (MacMillan). Questions should be addressed care of the O. R. Editor, Hospital Topics.

Q. I wish to pose two questions: (1) What difference, if any, exists between the Bard-Parker Formaldehyde Germicide and the suture solution put out by Ethicon in their suture cans? I am looking for a solution for the sterilization of knife blades, needles, and scissors. (2) Where can I get further information about O-Syl and its use?

A. Bard-Parker Formaldehyde Germicide and the Ethicon suture solution are corrosion-inhibited alcoholic solutions of formaldehyde. Bard-Parker Improved Germicide has hexachlorophene (G-11) added to enhance its germicidal properties. The former two require 30 minutes to destroy vegetative organisms; 18 hours to destroy spores. The latter is reported to be effective in 3 hours.

Further information about O-Syl is available from Lehn and Fink, Bloomfield, New Jersey.

Q. I would appreciate any information you may have on the correct procedure for the care of rectal gloves, before and after use. I am specifically interested in knowing whether it is necessary to sterilize rectal gloves.

A. Packages of rubber gloves are hydrated with a spray of distilled water immediately prior to sterilization, to prevent superheating and charring of the textile wrapper and rubber. This is doubly important if a glove conditioner is used, because the conditioner extracts all moisture from the gloves, superheating is inevitable, and deterioration and destruction are rapid.

Q. Is it safe to use closed hemostats which have been autoclaved in two double thicknesses of muslin at 250° for 30 minutes?

A. Instruments will not be sterilized if the steam sterilizer is locked. Steam sterilization is dependent upon contact of all surfaces with moist heat, and this is not accomplished if there are tightly apposed surfaces.

Plan Exciting Program For A.O.R.N. Convention

By Edith Dee Hall, R.N.

• Plans are shaping up for the Third Annual Conference of the Association of Operating Room Nurses, to be held at the Hotel Statler, Boston, January 30 to February 2, 1956, inclusive.

Boston operating room nurses on the local conference planning committee are working with the National Conference Planning Committee on the program.

The aim will be to present a program of interest and benefit to operating room nurses at all levels. To accomplish this, a more diversified program is planned, with three concurrent sessions being held each morning, Monday through Wednesday. Each session will cover a different subject, to enable every nurse to choose the one of most interest to her.

Morning programs and all exhibits, technical and scientific, will be at the Hotel Statler. Morning programs will run from 8:45 to 11. Exhibits will be viewed from 11 until 3, and afternoon sessions will be held from 3 until 5:30.

Afternoon meetings will be in John Hancock Hall, which is just off Copley Square, only a short distance from the Statler. The hall offers excellent equipment, perfect acoustics, and new standards of visibility and comfort for every member of the audience. Outlets are provided for drop microphones from the ceiling, to permit audience participation. The committee feels sure that everyone will be impressed with the beauty and modern facilities of this auditorium, which has seating space for over 1,100.

A partial list of topics for the program includes:

Panel Discussion: "Bacteriology in Relation to Aseptic Technic"

(a) Teaching bacteriology to nurses

(b) Surgeon's point of view

(c) Servicing hospital needs

(d) Servicing the O.R.

Panel Discussion: "Aortic Grafts."

Lecture and demonstration on explosion hazards.

"Emergencies During Surgery"

"Surgical Technical Aides in Action"

Panel Discussion: "Operating Room Nurses Prepare to Meet Community Disaster" (All participants, doctors and nurses, have had actual experience in disaster areas)

Panel Discussion: "Kidney Transplant" (by surgeon and team)

"Plastic and Reconstructive Surgery"

"Neurosurgery"

"Fibrinogen Therapy"

"Anesthetic Drugs"

"Hypnotism in Surgery"

"Clinical Instruction Program for the Student Nurse"

"A Three-Way Look at Teamwork"

"Interdepartmental Functions Vital to Operating Room Service."

A.O.R.N. HOSPITAL DAY

Thursday, February 2, has been set aside as "A.O.R.N. Hospital Day,"

(Continued on next page)

Below: Interior view of John Hancock Hall, Boston, where afternoon A.O.R.N. sessions will be held.

WOULDN'T IT BE NICE

Wouldn't it be nice if we found the temperature, time and moisture required to utterly destroy the cultures used in checking autoclaves? Then make an inexpensive control which always shows that these conditions have been exceeded.

We have exactly such a control in Diack.

Furthermore, it gives you a "Yes or No" answer, immediately.

Smith & Underwood

CHEMISTS

1847 North Main Royal Oak, Mich.

Sole manufacturers
Diack and Inform Controls

when operating room nurses in approximately eight of Boston's leading hospitals will act as hostesses at their hospitals. Details of the special programs being planned in each hospital will be announced.

All panel members, lecturers, and moderators are experts in their respective fields and have been selected with great care. The topics chosen are of vital interest. In nursing, as in medicine, certain subjects must be discussed and kept alive year after year. New approaches and views from other angles are invaluable in keeping technics and procedures up-to-date.

TECHNICAL EXHIBITS

Operating supervisors are being consulted more and more in the purchase of surgical equipment. Manufacturers recognize this fact and plan their exhibits to give nurses the information they need. Fine points of maintenance and operation of equipment are demonstrated. This personal service, the well-planned displays, and the available literature make the exhibit area an invaluable source of information.

The list of exhibitors so far includes the following firms:

Abbott Laboratories
North Chicago, Ill.

Aeroplast Corp.
Dayton, O.

Aetna Scientific Co.
Everett, Mass.

American Cystoscope Makers, Inc.
New York, N. Y.

American Hospital Supply Corp.
Evanston, Ill.

American Safety Razor Corp.
New York, N. Y.

American Sterilizer Co.
Erie, Pa.

Aseptic-Thermo Indicator Co.
North Hollywood, Calif.

Austenal Laboratories, Inc.
New York, N. Y.

C. R. Bard, Inc.
Summit, N. J.

Bard-Parker Co., Inc.
Danbury, Conn.

Bauer & Black
Chicago, Ill.

Rudolph Beaver Co.
Waltham, Mass.

Becton, Dickinson & Co.
Rutherford, N. J.

S. Blickman, Inc.
Weehawken, N. J.

Wilmot Castle Co.
Rochester, N. Y.

Chesebrough-Pond's, Inc.
New York, N. Y.

Gilbert Hyde Chick Co.
Oakland, Calif.

Clay-Adams, Inc.
New York, N. Y.

The Coca-Cola Co.
New York, N. Y.

Codman & Shurtleff, Inc.
Boston, Mass.

Coles Corp.
Philadelphia, Pa.

Conductive Shoe Co.
West Hartford, Conn.

Connecticut Bandage Mills
Bridgeport, Conn.

Cutter Laboratories
Berkeley, Calif.

Davis & Geck, Inc.
Danbury, Conn.

Davol Rubber Co.
Providence, R. I.

Deknatel, J. A. & Son, Inc.
New York, N. Y.

Doho Chemical Corp.
New York, N. Y.

Ethicon, Inc.
New Brunswick, N. J.

Fengel Corp.
New York, N. Y.

Fenwal Laboratories, Inc.
Framingham, Mass.

Gomco Surgical Mfg. Co.
Buffalo, N. Y.

Gudebrod Bros. Silk Co., Inc.
New York, N. Y.

Harold Supply Corp.
New York, N. Y.

Hoffmann-LaRoche, Inc.
Nutley, N. J.

Franklin C. Hollister Co.
Chicago, Ill.

Huntington Laboratories, Inc.
Huntington, Ind.

Johnson & Johnson
New Brunswick, N. J.

The Lawton Co.
New York, N. Y.

Lehn & Fink, Inc.
New York, N. Y.

Macalaster-Bicknell
Parenteral Corp.
Cambridge, Mass.

MacGregor Instrument Co.
Needham, Mass.

Marsales Co., Inc.
New York, N. Y.

Duncan C. McLintock Co.
Hackensack, N. J.

Mead Johnson & Co.
Evansville, Ind.

Meinecke & Co.
New York, N. Y.

V. Mueller & Co.
Chicago, Ill.

Ohio Chemical & Surgical Equipment Co.
Madison, Wis.

Orthopedic Equipment Co.
Bourbon, Ind.

Orthopedic Frame Co.
Kalamazoo, Mich.

Parke, Davis & Co.
Detroit, Mich.

Pharmaseal Laboratories
Glendale, Calif.

Pioneer Rubber Co.
Willard, O.

Propper Manufacturing Co., Inc.
Long Island City, N. Y.

Randall-Faichney Corp.
Boston, Mass.

Ritter Co., Inc.
Rochester, N. Y.

Will Ross, Inc.
Milwaukee, Wis.

Dennis R. Scanlan, Inc.
St. Paul, Minn.

Seamless Rubber Co.
New Haven, Conn.

Shampaine Co.
St. Louis, Mo.

J. Sklar Manufacturing Co.
Long Island City, N. Y.

Smith & Underwood
Royal Oak, Mich.

E. R. Squibb & Sons
New York, N. Y.

Travenol Laboratories, Inc.
Morton Grove, Ill.

Vestal, Inc.
St. Louis, Mo.

Edward Weck & Co.
Brooklyn, N. Y.

Winthrop-Stearns, Inc.
New York, N. Y.

Max Wocher & Son Co.
Cincinnati, O.

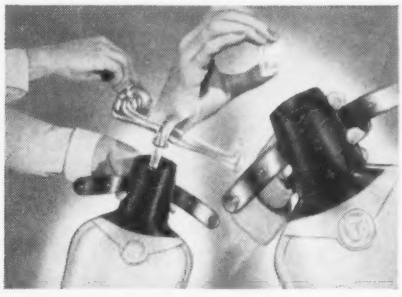
Zimmer Manufacturing Co.
Warsaw, Ind.

Plan now to attend, and urge your colleagues to come along. Remember that this is a conference for operating room nurses, planned by operating room nurses. See you in Boston!

What Decision Is Your Hospital Making?

Seamless *STOPPERLESS* Saves You Money – 3 Ways

ECONOMY—If you were to buy a cheap hot water bottle and a cheap ice bag, the combined cost of these two items would exceed that of the Stopperless Hot Water Bottle and Ice Bag Combination. That's Reason No. 1.



UTILITY—Unique neck construction accepts hot or cold water *and* ice cubes. AND, it will not leak. We threw it off the top of a 7-story building, filled with hot water—it didn't lose a drop. That's Reason No. 2.

LONG LIFE—No faulty or missing parts can disable Stopperless. There are no washers, no stopples, no chains, no threads. No leaks, no worries, no complaints. Satisfaction assured. That's Reason No. 3.

FINEST QUALITY SINCE 1877

SURGICAL RUBBER DIVISION

THE SEAMLESS RUBBER COMPANY

NEW HAVEN 3, CONN., U. S. A.

FINEST QUALITY SINCE 1877 SR SEAMLESS

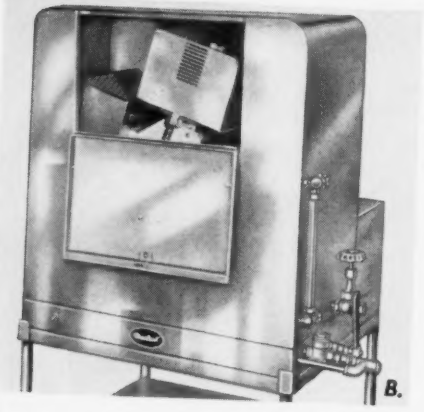
MacBicK

Macalaster Bicknell equipment, developed by in-the-hospital studies, offers *one source for better technique* in

CENTRAL SUPPLY

A.

C.



B.

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Sterilization of Supplies*

Part II.-Problem-Solving Clinic

MODERATOR: Mrs. Verna Wilson, R.N., Former Operating Room Supervisor, Barnes Hospital, St. Louis

PANEL: Velma L. Chandler, Ph.D., Chief, Department of Microbiology, Ethicon, Inc., New Brunswick, N.J.—"Sterilization by Chemicals"

P. L. Engler, Scanlon-Morris Division, Ohio Chemical and Surgical Equipment Co., Madison, Wis.—"Sterilization by Saturated Steam"

Helen Horvat, R.N., Central Supply Supervisor, John Cochrane VA Hospital, St. Louis—"Sterilization by Dry Heat"

J. N. Masci, Director, Pharmaceutical Research Section, Johnson and Johnson, New Brunswick, N.J.—"Packaging of Supplies"

Q. We have a 60-bed hospital, and the question of sterilization of our packs arises constantly with every new piece of literature published. We include gowns and towels in our major packs, and have been autoclaving them for one hour. Is that too long?

MR. ENGLER: The time of sterilization is going to be governed by the size and arrangement of the pack, because in order to get complete sterilization—and I presume that you're talking about steam sterilization—there must be complete penetration. You must be very careful in packaging and folding gowns and various other materials to allow for penetration by steam. In other words, the pack shouldn't be in excess of 12 x 12 x 20,[1] and should be very carefully made up so that there are not layers of impervious material to restrict the flow of steam through the pack. The steam must get down into the center of the pack.

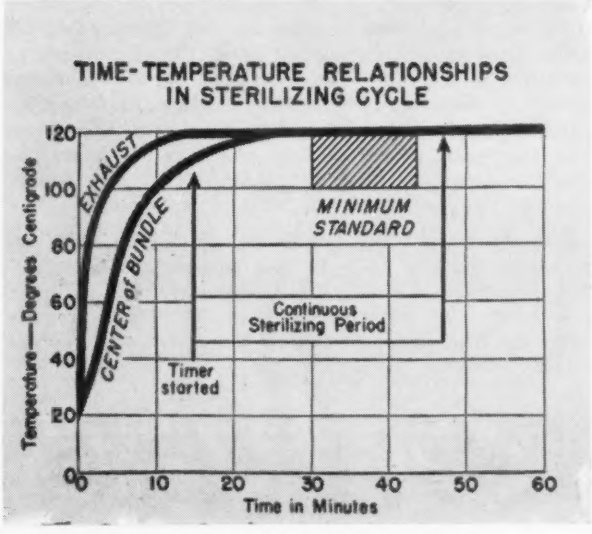
The other factor to consider is the position of the pack in the sterilizer. The pack should be positioned so that the layers are vertical. In that way steam will penetrate, because the steam comes in at the top as the air goes out at the bottom, and can work its way through this pack.

When loading a sterilizer, I imagine that I am going to sprinkle the load with water and want the water to run down off the pack.

MR. MASCI: The questioner did not mention the temperature of sterilization. It's rather difficult to say whether one hour is too long or not long enough without knowing the temperature used, but I assume that she's talking about the customary technic of sterilizing at approximately 250° F. (121° C.)

What Mr. Engler has said is all very true. The actual time of sterilization can be as short as 20 minutes at 250° F. But this time is counted only from the time that the entire sterilizer reaches that temperature, for if the pack is not properly made up and wrapped it may require at least 20-40 minutes to reach sterilizing temperature. (See Figure I** at left.)

Figure I



Most of you are familiar with the prescribed rules for making up a surgical pack. However, I'll go over a few of the major points, so that at least we will know that we agree on the basis for packing, particularly packing the larger surgical pack.

It is advisable to place towels and compresses and drapes, folded and one on top of another, so that all the layers are in the same direction. That pack should then be placed in the autoclave so that those layers of fabric are vertical, as Mr. Engler mentioned. The reason for that is that the steam will then displace the air gradually as it moves through the autoclave.

The pack must be loosely packed, and wrapped in such a way that the muslin cover will permit steam penetration but will not permit recontamination later.

Even under the best conditions, it is found that a pack of the prescribed size—no greater than 12 x 12 x 20—will require at least 10 or 15 minutes to reach the proper temperature. If one adds 20 or 30 minutes for the steriliza-

(Continued on next page)

*Second and concluding part of the transcript of a panel discussion presented at the Second National Conference, Association of Operating Room Nurses, St. Louis, January 24-27, 1955. The first installment appeared in the September issue.

**Accompanying illustrations are from *Aseptic Treatment of Wounds*, by Carl W. Walter, M.D. and are reprinted by permission of the Macmillan Co., publishers.

1. This size allows for easy handling and is one on which studies of heating and penetration times have been done on standardized material.—ED.

tion time, one would conclude that under the best conditions the job could be done in 40-45 minutes.[2] So one hour may be a little too long. (See Fig. II, opposite page)

Q. Do you sterilize suture needles in dry heat, and how do you wrap them? If Vaseline gauze has been sterilized by a hot-air sterilizer for two hours, how long is it considered safe—that is, when it's stored in a covered dish?

MISS HORVAT: We'll start on the first one. Because of the danger of transmission of homologous serum jaundice, all suture needles are sterilized by heat—one hour dry heat at 160° C. (320° F.); four hours at 121° C. (250° F.), or 30 minutes at 250° F. in saturated steam.

In answer to the question about sterilization of Vaseline gauze, sterilization by dry heat is dependent on many factors: the amount to be sterilized, the container's surface and depth, and the temperature used. It is advisable to sterilize Vaseline gauze and ointments in small quantities —preferably enough for one application only—thereby avoiding the possibility of contamination by dust particles and air-borne bacteria, once a larger container is opened.

An effective way to prepare Vaseline gauze is to place 15-20 strips of 2″ roller bandage, 8″ long, in a small catheter tray. These, I believe, measure about 2½″ wide, 1½″ deep, and 8″ long. Melt the Vaseline and add approximately three ounces to the gauze strips. I have found this to be most effective. It is my feeling that more than three ounces of Vaseline makes gauze which is too thick for easy handling.

Then sterilize this Vaseline gauze at 150° C. for two and one-half hours, or 170° C. for half that time.[3]

Q. While we're on the subject of Vaseline gauze, here's another question: In the sterilization of Vaseline gauze we are told to moisten the gauze for autoclaving if no hot-air sterilizer is available. What about that?

MISS HORVAT: To moisten the gauze if no hot-air sterilizer is available is good. Dr. Walter recommends the sterilization of Vaseline gauze with the ordinary dressing sterilizer. You get sufficient steam during the melting process of the Vaseline to provide the moisture that would be required to kill the most resistant spores. Moisture is required to kill the resistant spores, and kills them in less time than it would take with dry heat.

Q. Dr. Chandler, what are most hospitals using to sterilize their eye instruments? Sharps, cataract knives, and so forth? How do you sterilize eye instruments, also urology instruments? Do you boil sharps for eye surgery? I think you can also include bronchoscopic and GU instruments, because we have questions about them.

DR. CHANDLER: I think it's ridiculous to ask: "What do most hospitals do?" That's not the answer to any problem. What *should* most hospitals do? As I stated before (see HOSPITAL TOPICS, September, 1955, pp. 85-88 —ED.), any instruments which can be subjected to heat should be sterilized by heat. When they cannot be, and if you feel that they have been contaminated with resistant forms of bacterial spores, you are taking a calculated risk if you use a chemical agent. There are chemical agents that are effective against bacterial spores, providing that the time of exposure is sufficiently long. Formaldehyde solutions are probably the most effective; iodine also is effective.[4]

But if you feel that you want to take the calculated risk, then almost any of the germicides will be effective against the less resistant types.

Q. Mr. Engler, how satisfactory is paper when used in wrapping supplies?

MR. ENGLER: I think it can be very satisfactory. There are a number of concerns marketing paper that is very suitable for packaging. Now that question gets into packaging again, and perhaps Mr. Masci would have some comment. The only concern that I have about packaging by paper is that when those packs are stored for a period of time the paper will become dried up, and there is a tendency or a possibility of the paper's becoming torn. That is just a personal opinion. I'm still of the old school, accustomed to two thicknesses of muslin—not a canvas, no impervious wrapper such as that. But two layers of muslin is very satisfactory. We do know that there are satisfactory paper wrappers available. I received some nice samples of some unusually tough, porous paper that I'm sure would be very satisfactory. Mr. Masci, do you have anything to add?

Q. As Mr. Masci talks, I think he can give us something on this at the same time: In case the emergencies increase the operations for a day's schedule and you need additional silk sutures or material, can you "flash"-sterilize silk, using the flash instrument steam autoclave? Can you also "flash"-autoclave unwrapped sponges in an emergency?

2. Studies have shown that a sterilizing period of 30 minutes allows for complete penetration of a load plus 13 minutes for destruction of the least accessible spores in the standard pack.—ED.

3. It has been suggested elsewhere in this magazine that Vaseline gauze be prepared as described, hydrated with 2-3 cc. of water, and sterilized at 160° C. (320° F.) for one hour or 121° C. (250° F.) for four hours. —ED.

4. Caution must be taken to rinse thoroughly all residual germicide from the instruments before they are used.—ED.

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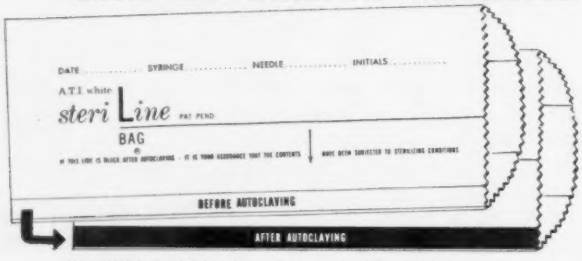

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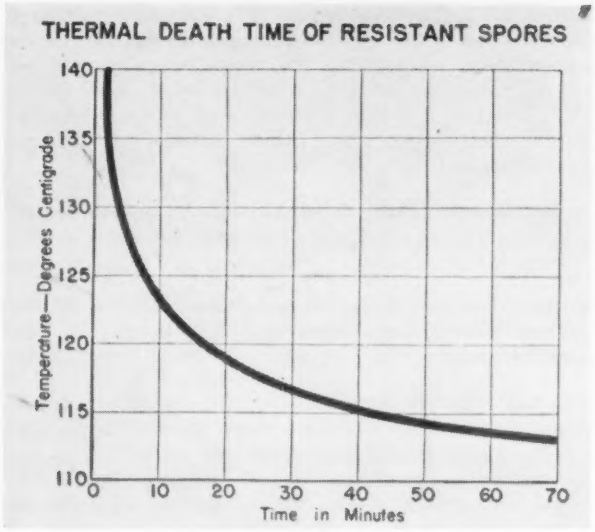

Figure II

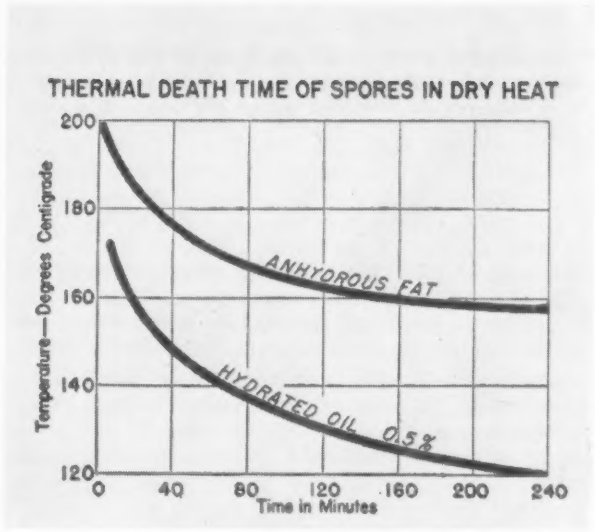

Figure III

MR. MASCI: As Mr. Engler has said, there are several papers on the market which are quite suitable for many packaging jobs in preparing materials for sterilization.[5] All of these papers, however, must be used wisely. Even a 35-pound white Kraft becomes quite brittle after sterilization. For that reason it is not advisable to wrap large packs with paper. They're so easily punctured in handling.

Paper is very useful in wrapping syringes and other glassware. Wherever the handling of the item is not a problem, certainly the right kind of paper can be used. However, it must be strong; it must not become excessively brittle on sterilization.

There's another problem. There are many strong Kraft papers on the market which have been highly calendered —that is, run through a roller press at high temperature and pressure while wet. This process forms the paper into a good, tight paper, but unfortunately it's a little too tight. This kind of paper reduces the rate at which steam penetrates quite a bit.

To go into the other question, I think it would be well to consider first just why "flash" sterilization is considered acceptable for metal instruments.

Remember that the prime considerations in killing bacteria by saturated steam are having moisture present at the surface that's contaminated and having the right temperature for the right length of time.

Metal instruments are unique among surgical supplies in that they have only a surface to be sterilized. They need not be penetrated. Furthermore, being of metal, they heat very rapidly. Therefore, instruments can have their surfaces loaded with moisture and arrive at the proper sterilization time within minutes, or in "flash" sterilization, in less than a minute after being placed in the sterilizer.

Such is not the case with silk sutures and gauze dressings. With a gauze dressing you have the problem of displacing the air with the steam before you can condense enough moisture in the fabric to sterilize effectively. It is absolutely necessary to get that moisture there, because in the absence of moisture it would require the temperature and time of dry-heat sterilization to kill the spores. (See Fig. III above). Therefore normally you would not consider such a technic for these materials.[6]

However, in emergency procedures, when there is no other recourse and a human life hangs in the balance, certainly any step toward minimizing the risk but controlling the emergency may be justified by the surgeon.

Q. Is it necessary to moisten the inside of drains, catheters, tubing, and so forth before autoclaving?

MR. ENGLER: The inner side of the catheters and tubing is always moistened, because the rubber will not allow the steam to penetrate from the outside in, and if the tubing does contain moisture that will be flashed into steam when the temperature is raised in the autoclave, you have the effect of saturated steam to accomplish the sterilization.

Q. Please suggest the proper method of keeping Penrose drains sterile in surgery. Miss Horvat, will you answer that?

MISS HORVAT: I would advocate preparing Penrose drains in single containers. I think the more you can fix your containers for just one usage, the better technic you'll carry on throughout. But I would recommend trying to anticipate your needs for a particular day and preparing accordingly, to avoid carry-overs and use of possibly contaminated items.

Q. Anybody else on the panel have any ideas? Probably we'd better let that ride. I know it's done millions of

(Continued on next page)

5. Bacteriologic data substantiating the use of these paper wrappers has not been readily available.—ED.

6. Small quantities of silk, unwrapped and hydrated prior to being placed in the sterilizer, can be effectively sterilized in the high-speed sterilizer. —ED.

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different ways.[7] Now, what method can be used in checking autoclaves for effectiveness in sterilization, other than doing cultures on sterilized packs and using Diack controls?

MR. ENGLER: I consider the use of a potentiometer a good way of checking sterilizer efficiency. A potentiometer is a device in which a thermocouple, which is just a heat-sensitive junction of two wires, is located in the center of a pack or flask. The wires are brought out the sterilizer door, and the time required for the center of the pack to reach sterilizing temperature is either read on a dial or recorded on a temperature chart.

Another possibility is the use of "telltale" thermometers which are located directly in the pack. The temperature, as with an ordinary fever thermometer, will stay at the maximum point reached until the thermometer is shaken down.

Q. Mr. Engler, what do you think of the chemical indicators on the market today?

MR. ENGLER: There are several good indicators on the market. The only thing I'm worried about is the proper use of them. They have to be located right, and they have to be read correctly. Some of these indicators have sections in which color changes. A dozen people will get different ideas of how much of a change took place. So you always have the human element in the use of those indicators. I really wouldn't care to say anything for or against them.

DR. CHANDLER: I would like to know why people are objecting to using bacterial cultures. They are the best indicators. Baltimore Biological Laboratories now supplies a preparation of a heat-resistant, spore-forming organism which can be sterilized with a load and then sent to the laboratory for culture.[8] It's a wonderful indicator for the efficiency of the sterilizer.

MR. MASCI: I want to comment first on what Mr. Engler said. He's quite right about the matter of controls, and so is Dr. Chandler. There are two bases for establishing good controls for hospital or any other sterilization. One is that by the use of resistant organisms placed in strategic parts of the load under actual operating conditions, you demonstrate that under a given set of conditions you can kill these bacteria.

The second is that a set of mechanical controls is needed to demonstrate that these conditions are maintained or reached every time the autoclave is run. One without the other is not quite complete. And although it may seem redundant for you to have each hospital check its sterilizers, it is a fact that the actual conditions of making a pack and running a sterilizer vary so that it is indeed worthwhile to check the conditions of sterilization with bacterial cultures. The other controls are mechanical and insure the proper functioning of the sterilizer. By the proper use of bacterial cultures, you can gain assurance of the reliability of the thermometer, the recording thermometers in the exhaust line, and the pressure gauges.

Q. If the most heat-resistant spores are destroyed in 13 minutes' exposure to saturated steam at 250° F., why do you recommend 20-30 minutes after the pack is entirely heated throughout?

MR. MASCI: The only reason is to provide a margin of safety. When I say to start timing after the pack is entirely heated throughout, we must recognize that not all the packs are going to reach temperature at exactly the same time, and some provision must be made for those packs which contain either denser materials or are more densely packed. It is just the margin for error.

Q. Dr. Chandler, where do you obtain the spore indicators?
DR. CHANDLER: Baltimore Biological Laboratories, Baltimore, Md.

Q. Dr. Chandler, is Zephiran solution safe to sterilize sharps, needles, and instruments? How long is the sterilization time?

DR. CHANDLER: Zephiran is one of the quaternary ammonium compounds, of which there are thousands. They are not sporicidal. I have no concrete evidence that they are tuberculocidal either. They do kill off common bacterial pathogens, and they will attack the molds and the fungi.

Knowing those limitations, you have to decide whether you want to take the calculated risk that I mentioned before, and use them in a given situation. One word of warning, however: The time of exposure is extremely important. Sterilization does not occur immediately with the more resistant type of organism; it does occur rather readily with the less resistant types. So you must use sense and reason when you employ these agents, and recognize their limitations. If you look at the labels for any of the "quats," you'll find there is no claim for sporicidal activity. Are you willing to use them in situations in which the manufacturer does not recommend their use? If you must use them, employ the correct exposure time and the correct concentration, and be sure you have removed all organic material.[9]

Q. Please discuss boiling of instruments.

MR. MASCI: Certainly today boiling instruments is considered a second choice. Steam sterilization performs so effectively and so much more rapidly that certainly every hospital can afford one steam autoclave.

If there is no other alternative, then there are a number of precautions which should be adopted to make boiling water sterilization of instruments more effective. One thing to remember is that boiling water will kill all but a few very resistant spores in about 30 minutes of free boiling at 212° F. In the higher altitudes in the West and the Midwest, one runs into the problem of a lower boiling point of water, and in places like Denver, water may boil at a mere 200° F., I am informed.

That fact poses a very considerable problem and should be reason enough for not considering boiling-water sterilization of instruments at all. Under those conditions, at 200° F., it would require at least 60-70 minutes to reproduce the same condition obtained at 212° F. in 30 minutes.

With those few words, I would say, prepare the instruments very carefully for boiling-water sterilization by cleaning them thoroughly of all organic matter, grease, and oil. Be sure that they are completely submerged in the sterilizer. The addition of alkali to lower the hydrogen ion concentration is desirable, inasmuch as the time for sanitizing can be reduced from 30 minutes to 15. Sal soda is added to the sterilizer to make a two percent solution or lye to make a 0.1 percent solution.

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7. Penrose drains can be prepared as any other surgical supply—packaged in muslin wrappers, sterilized at 250° F. for 30 minutes, and stored in a clean, dry, vermin-free place until used.—ED.

8. The use of bacterial cultures for the control of sterilization is impractical because the incubation period is too long. See detailed discussion in Chapter VIII, *Asceptic Treatment of Wounds.*—ED.

9. Chemical disinfection of instruments and needles should be abandoned in favor of heat sterilization because of the danger of transmission of homologous serum jaundice.—ED.

Q. Miss Horvat, how can we prevent the charring of materials in a hot-air oven?

MISS HORVAT: Cotton material will char at 200° C., and the important thing to remember when sterilizing anything with cotton or gauze stoppers is to maintain the temperature at 160° C. for two hours and not allow it to go any higher.

Q. What would you say is the best way to treat materials used in a contaminated case? Pathogenic organisms, such as the tubercle bacillus?

DR. CHANDLER: Linens, instruments, and other material contaminated with the tubercle bacillus should be autoclaved. Floors, pans, etc., are best disinfected with the various phenolic soap mixtures.

As far as linens are concerned, they should be autoclaved, even before they're laundered.[10] As a matter of fact, autoclave everything possible. That's the safest way to destroy organisms.

Instruments which cannot be subjected to heat and which are contaminated with tubercle bacilli may be sterilized by exposure to Chlorpactin, which, I am told by the Trudeau Laboratory (the National Tuberculosis Association laboratory), is very effective as a tuberculocide. This laboratory has recommended it for use with bronchoscopes, saying it will not destroy the cement. If tetanus, gas bacilli, etc., are the contaminants, you *must* use heat. You can't take the chance of disseminating those things throughout your surgery.

MR. ENGLER: I'd like to take this opportunity to bring in the question of sterilization of contaminated instruments, which Dr. Chandler mentioned. There is available the instrument washer-sterilizer, which is especially designed to take care of instruments which have been contaminated, without danger to the person handling them.

Q. If you have more instruments on an instrument tray, do you autoclave it longer than you do a small load?

MR. ENGLER: We always time sterilization by reading the thermometer which is located in the air and condensate discharge line, which is the coldest part of the sterilizer. Start timing the sterilizing cycle when that thermometer gets up to 250° F., or, if you're using high-pressure sterilization of instruments, 270° F.

Q. Mr. Engler, would you go ahead and give the sterilization time on linens, hardware, glass, rubber goods, and so forth, from the time you start timing?

MR. ENGLER: On linens, in properly loaded sterilizers, packaged as discussed previously—30 minutes at 250° F. On hardware, 15 minutes, at 250° F.

Q. Unwrapped or wrapped?

MR. ENGLER: That's unwrapped instruments and hardware.

Q. How about glass, unwrapped?

MR. ENGLER: If it's placed in the autoclave in the proper manner, in such a way that air can escape freely from the container, 15 minutes at 250° F.

Q. How long for rubber goods—the same?

MR. ENGLER: Rubber goods—15 minutes at 250° F.

10. Linen from a contaminated case can be safely handled without autoclaving if the following technic is observed: The soiled linen must not be allowed to dry for prolonged periods of time. The contaminated linen and the bag in which it is contained are dumped into a washing machine, which is filled with cold water and run for 20 minutes to take out blood stains and leach out the proteins. Water softener and soap are then added until there is a good head of lather. Three percent excess soap is next added to provide a minimum pH of 11 to insure sterilization. The water is heated to boiling, and soap is added a second time to make a good head of lather. The clothes are then rinsed and finished along with the other hospital laundry.—ED.

Q. If instruments are wrapped, how long?

MR. ENGLER: Minimum of 15 minutes.

Q. Miss Horvat, do you agree with these?

MISS HORVAT: I don't think anyone will ever agree. I think everyone has pretty much her own system on timing.[11]

Q. How long can muslin-wrapped packages be considered sterile if they are stored?

MISS HORVAT: I'm afraid to say again, because I'm sure there will be wide discrepancy of opinion, and there are too many factors involved to permit me to give a blanket opinion.

MR. MASCI: Since I'm not an operating room supervisor, I can speak a little more freely, because I don't have to face a lot of angry people afterward. Generally, it is conceded that dry goods shouldn't be stored more than two weeks. The problem is very difficult, however, because it involves whether or not the packages have been so wrapped as to control the bacteria that might re-enter the package from breathing, due either to handling or atmospheric changes. For that reason it is very difficult to say whether a package is going to last three weeks, three months, or three years. Conceivably, it can do any of those.

As a safety precaution, just in case the wrapping is not quite the best, certainly a two-week period seems reasonable.

Q. What material do you recommend for cloth covers, and why?

MR. MASCI: For dry goods supplies, for covers on instrument trays, and similar uses, we recommend two thicknesses of muslin—muslin, because tighter fabrics inter-

(Continued on next page)

11. What is the time required to destroy bacteria? Do not forget this common factor in the problem.—ED.

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Designing a central service department for most efficient functioning will be the subject of a series beginning in an early issue of HOSPITAL TOPICS.

Collaborators on the series will be Frederick E. Markus, Markus & Nocka, Boston, and Mrs. Jean Christie, R.N. Mr. Markus, author of a brief article in a recent issue (August, 1955) on the importance on good design in central supply, found such a wealth of material on the subject that he decided to make the results of his studies available to the hospital field through this publication.

Some of the subjects which will be covered in articles include the faults in conventional central service facilities and the application of industrial concepts to planning. The various work stations in central supply will be analyzed and a flow chart developed.

fere with the displacement of air by steam, and because it seems fine enough, particularly with two layers, to prevent recontamination through the fabric for an appreciable length of time. That doesn't mean that a pack has to be wrapped with two pieces of muslin. If the wrapping is wide enough so that there are at least two thicknesses at any one spot, it will be adequate.

Q. How many minutes do you recommend sterilizing large metal drums packed with linen?

MR. MASCI: I could hedge that and say it depends on how large the drum is. But you already know that! I can't answer, because it depends entirely on how the drums are packed, what kind of drums they are, and half a dozen other factors which I can't even guess at. However, I think I can indicate what things are important, so that perhaps you can decide for yourself.

On older-type drums which had one or two rows of holes concentrically, the length of time required to get the load up to temperature was astonishing. With the modern drums that are pretty well fenestrated, the delay is not quite so great. However, there may be as much as a 50 percent decrease in the rate at which you can displace the air.

Because all these things are variables, I believe that the only way you can get a satisfactory answer to this is to work out a technic with your own drums and your own sterilizer, using cultures to establish what length of time is satisfactory, and then stick to that routine.

Q. If no hot-air oven is available, what would you suggest for dry-heat sterilization?

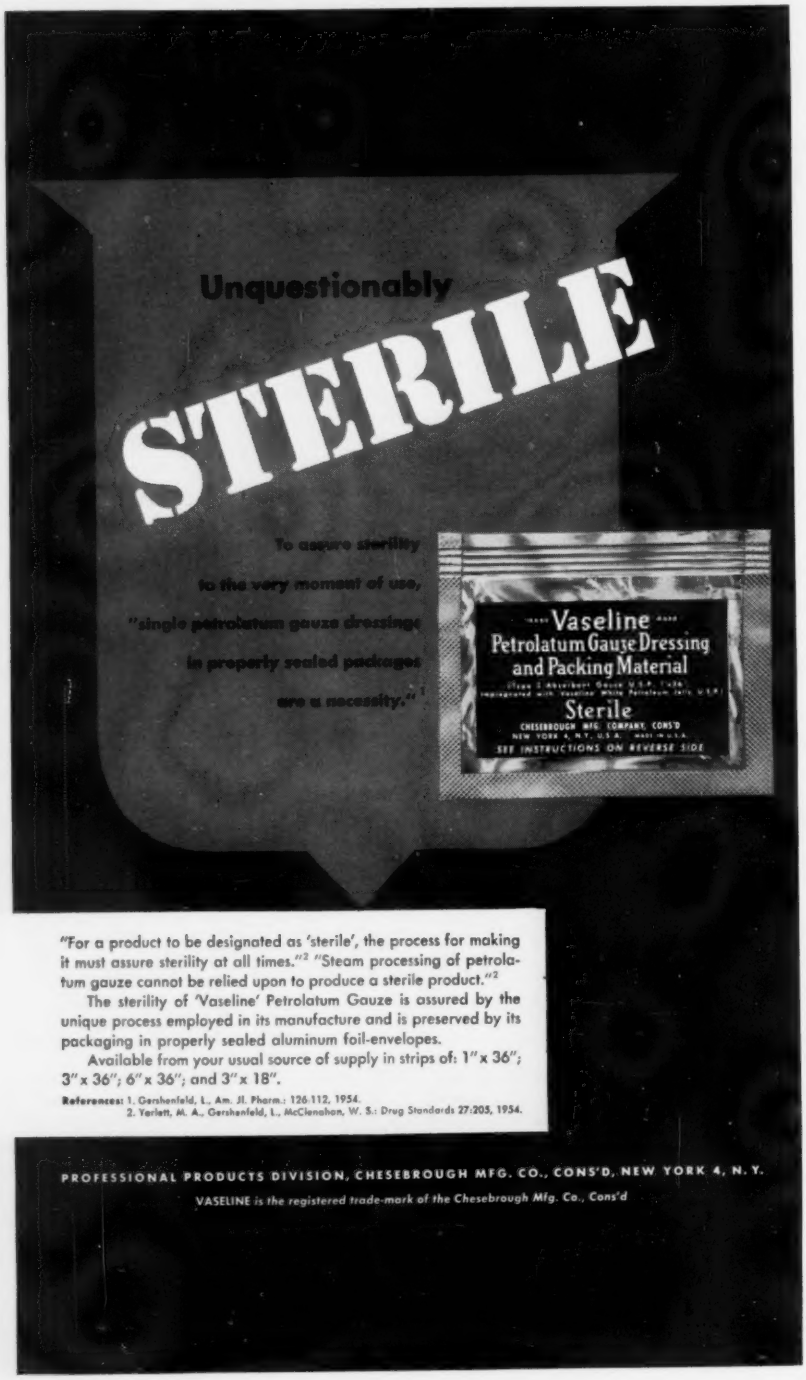
MISS HORVAT: I would recommend the use of the ordinary dressing sterilizer. The technic for using it for dry-heat sterilization is as follows: Load the sterilizer as usual; close the door and turn the steam into the jacket *only*. The chamber will heat by radiation. The exposure time is four hours at 250° F. A convenient technic is to load the sterilizer as described and leave the load in overnight.

Q. What agent or disinfectant do you recommend for use in a TB hospital? What chemicals are recommended to disinfect rubber goods used on known tuberculosis cases—example, anesthesia equipment, intertracheal tubes, and so forth? How do you sterilize bronchoscopy instruments? Do you think all bronchoscopy cases should be considered potential TB cases and treated accordingly?

DR. CHANDLER: Chlorpactin, which I mentioned earlier, is obtained from the Guardian Chemical Co., 10 43rd Ave., Long Island City, N.Y. When I knew that I was going to be on this panel, I corresponded with the Trudeau Laboratory, which recommended this agent. I also corresponded with Dr. Smith at Barlow Sanitarium, who has been considered an authority in the tuberculosis field for many years. He still feels that alcohol is a good antitubercular agent and continues to recommend its use. He also states that one of the phenolic soap compounds, orthophenylphenol, is an excellent agent. "It has recently been shown," according to Dr. Smith, "that the alcohol-formaldehyde mixtures are not as efficient tuberculocides as they used to be considered to be. They're not completely condemned, but they don't stand up there where they used to." Now here's a question that follows that statement:

What type of alcohol and percentage is used for the control of tubercle bacilli?

Dr. Philip Price, at the University of Utah, has done the most work in the study of bacteriostatic and bacteri-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cidal actions of alcohol. I don't recall that he ever specified any particular concentrations to be used against the tubercle bacillus, but as a general germicide, he says that any concentration between 50 percent and 90 percent is effective. Most institutions I know use 70 percent, because early work showed that apparently that was the most effective concentration. However, Dr. Price has done much work and has shown that anywhere from 50 to 90 percent is satisfactory.

I'd like to remind you again that it need not be ethyl alcohol. Isopropyl alcohol is just as effective, at 50 to 90 percent concentration. There's of course a distinct advantage to using isopropyl alcohol—the Revenue boys don't have to be contacted on it, and it's a lot cheaper.

Q. How do you sterilize syringes used in infectious hepatitis?

DR. CHANDLER: Sufficient heat will do the job. You realize that hepatitis is caused by a virus which cannot be demonstrated in animals and cannot be cultured. The only way you know whether it exists or not is when it shows up in man. And we can't be running around using people for guinea pigs to find out whether we've destroyed the agent or not.

There is no evidence that the virus has been transmitted when sufficient heat sterilization has been used.

One should be very careful of needles, to use heat sterilization after they've been used on one patient and before they are handled by workers, to prevent transmission of infectious hepatitis from patient to patient.

Blood lancets, employed by technicians, also can carry the infectious agent.

Q. In sterilizing goods—drains and so forth—in boats, are they sterilized with lids on or off?

MISS HORVAT: When sterilizing shallow boats, leave the lids off. Whenever sterilizing any container, take off the lid, because air trapped in the can is a poor conductor of heat. Also the lids should be off all bottles when they are being sterilized.

Q. Can syringes be sterilized by leaving the plunger and barrel assembled and covering the tip with a plastic cover?

MISS HORVAT: I have not become too acquainted with this method, but according to the literature available syringes can be sterilized unwrapped, with just the plastic tip.

Q. What would you consider the best agent for sterilizing heart catheters?

MISS HORVAT: Heat would be the best. It depends on the type, whether plastic or something else.

Q. How soon can gloves be worn after being sterilized?

MR. ENGLER: Sterilized by steam sterilization, I presume—as soon as they cool off.[12]

Q. How can I prevent rubber gloves from becoming tacky in autoclaving?[13]

MR. ENGLER: One thing I would like to say about the question of sterilization of rubber gloves has to do with the proper packaging of rubber gloves for steam sterilization. Rubber gloves should be washed, dried, and powdered, and then in order to get the steam into the interior of the rubber glove it is necessary to keep the glove surfaces separated. A gauze pack is positioned in the glove to provide free access for steam.

If you will do that, and if you'll put the gloves in the specially designed folders, with the thumbs up, so that the air can flow out naturally, you'll find that you get very effective sterilization of the rubber glove at a time and temperature that will not damage the gloves. I think that most gloves which become tacky have been subjected to too high a temperature for too long a period of time, and also have been subjected to too many sterilizations and have almost served their useful life.

Q. How long should nylon scrub brushes be autoclaved?

MR. ENGLER: I would say 10-15 minutes.

Q. How do we have superheated steam, and why do we have it in the autoclave?

MR. ENGLER: That's quite a question to answer briefly. There is a possibility of having a certain degree of superheated steam. If I were to go into the physics of it, it would take quite some time, but I'll say this: The only time that you will have superheating effect is if you put the dressings in the autoclave and leave them in there without any steam in the chamber until they become very desiccated—free of moisture, entirely dry. Then at the time you first admit steam into the chamber you will have such a rapid absorption of the steam by these desiccated fibers that you would be able to measure with a very sensitive thermocouple and potentiometer a little flash of temperature in excess of what you'd normally get at, say, 20 pounds steam pressure in the jacket or 260° F.

Freshly laundered wrappings have enough moisture so that this superheating effect is avoided.

Q. What about sterilization of syringes? Should one end or both ends be closed? Should they be sterilized in open pans, or with the barrel in, or the barrel out?

MISS HORVAT: I think that here, as in other things, there is a wide discrepancy of ideas, but ordinarily it's recommended that the barrel and plunger can be put together and sterilized in syringe boxes, providing they are moistened before they are placed in the boxes. By following this procedure, one is assured of satisfactory sterilization.

For sterilizing syringes in sterile tubes, the same procedure is used—barrel and plunger are put together, and the syringe is moistened before placing in the tube. I think the best way is to separate them to get effective sterilization.

Q. Is it possible to sterilize wooden blocks for shaping bone grafts? If so, how? The questioner means a square of wood that is to be used to cut bone or cartilage right in the sterile operation.

MISS HORVAT: I would probably wet the block, wrap it in muslin, and sterilize it at 250° F. for 30 minutes.

MR. MASCI: I should think the best way to handle the little wooden blocks would be to autoclave them. They carry enough moisture within them so that autoclaving at 250° F. for 30 or 40 minutes should be adequate.

Q. If Chlorpactin is so effective for tubercle bacilli, would you advise using this for chemical sterilization wherever such sterilization is indicated?

DR. CHANDLER: I have not investigated the activity of this agent. It was recommended by the Trudeau Laboratory, as I reported. However, knowing that it is an effective tuberculocidal agent, I'm sure that it could be used for the eradication of the common pathogens, the less resistant types of bacteria. I don't have any idea about its activity as a sporacide.

Q. Do you think all bronchoscopy cases should be considered potential TB cases and treated accordingly?

DR. CHANDLER: I haven't any idea of the incidence of TB among those cases. I think your physician should

(Continued on next page)

12. Rubber gloves imbibe water during sterilization and should be allowed to dry out for 48 hours after sterilization to regain their tensile strength.

13. Tackiness in rubber gloves can be attributed to many things. All traces of quaternary ammonium compounds should be rinsed off immediately after the gloves are removed. Avoid contact with grease and oil. A small quantity of Bio-Sorb in the rinse water when the gloves are being processed will do much to eliminate the tackiness. Avoid strong detergents when washing rubber gloves; a mild soap should be used.

be able to guide you in that respect.

Q. What do you think of a formaldehyde cabinet?

DR. CHANDLER: Formaldehyde gas requires, for sufficient sterilization, a long exposure time, and I think that the cabinets do not provide proper conditions.

Q. Do you feel that cold sterilization of knives and scissors is safe and sufficient?

DR. CHANDLER: No!

Q. How long must one sterilize sharps, having steam only in the jacket of the steam autoclave?

MR. ENGLER: I assume that the questioner means that there's going to be only jacket pressure—no steam in the chamber. Then, if you have 20 pounds steam pressure in the jacket, and all air eliminated—no air-steam mixture—you would have the equivalent of 260° F. Under those conditions with no steam you would have a dry-heat or a hot-air oven. I would not like to depend on sterilization by dry heat at 260° F.; 320° F. has been recognized as the temperature required for killing the spores and bacteria under dry heat.

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A. S. Aloe Co. 36
Aseptic-Thermo-Indicator Co. 98
C. R. Bard, Inc. 25
Bard-Parker Co. .....3rd Cover
Rudolph Beaver Co. 67
Becton, Dickinson & Co. 21
J. Bishop and Co. 72
The Buckley Corp. 57
Robert Busse & Co. 33
Wilmot Castle Co. 32
Chesebrough Mfg. Co. 102
Gilbert Hyde Chick 10
Classified 83
Clay-Adams .....Opposite page 52
Cutter Laboratories 84
Davis and Geck .....2nd Cover
J. A. Deknatel & Son, Inc. 34
De Puy Mfg. Co. 5
Ethicon, Inc. .....Opposite page 12
Flex-Straw Corp. 33
Gudrun Frederiksen, R.N. 66
Gomco Surgical Equip. Co. 8
Graham-Fields 67
Hanovia Chemical & Mfg. Co. 71
Hausted Mfg. Co. 1
Hill-Rom Co., Inc. 79
Homemaker Products Co. 53
Johnson, Mary A., Assoc. 81
Lakeside Laboratories .....4th Cover
Lehn and Fink Products Corp. 104
Eli Lilly and Co. 6
Macalaster Bicknell Parenteral Corp. 96
Massillon Rubber Co. 77
Medical Instrument Repair Co. 99
Miles Laboratories 35
Minnesota Mining and Mfg. Co. .....Between 52 and 53
J. J. Monaghan Co. 11
V. Mueller and Co. 57
Parke, Davis and Co. 78
Pharmaseal Laboratories 12
E. M. Rauh & Co., Inc. 52
J. T. Posey Co. 31
Proper Mfg. Co. 29
Sanit-All Co. 81
Seamless Rubber Co. 95
Shay Classified 81
Smith-Stephenson Co. 65
Smith and Underwood 93
The Upjohn Co. 68
Edward Weck and Co. 82
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Woodward Classified 80, 83
Zimmer Mfg. Co. 4

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